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NEXT GENERATION

The future of interactive entertainment

March 1995

Does PlayStation

live up to the
hype?

Sony's plan for gaming domination

has reached the solid state.

And now it's coming to America...

volume one

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Twelve months after Sony's initial threat to Sega and Nintendo, PlayStation is on Japanese streets and industry pundits predict a September US launch. NEXT Generation arrives at the ultimate gaming platform on page 36



SONY



PlayStation

RESET

POWER





The **Sony PlayStation:** Hardware launch of the decade?

And so the waiting ends. Sony's very first dedicated game machine has arrived, and boy — has it been worth it.

Never before has a hardware launch been so... right. Everything from the casing to the sexy, black CDs to the brilliantly designed memory cards to the sheer power of the beast. Sony hasn't overlooked a single thing — and it has delivered, just like we predicted it would in our premiere issue.

And in doing so, Sony has squeezed everything from the CD format. We're now in a position where a near-perfect conversion of a state-of-the-art coin-op is thrown into RAM in one go, taking around 10 seconds. But then you never really notice, because you're too busy trying to rack up that elusive 'Perfect' on the *Galaxians* loading game — a juxtaposition of the old and the new. And **NEXT Generation** will be most disappointed if the entire game isn't in there somewhere...

Similarly, Namco has worked wonders in the paltry few months it has had to convert a massively complex arcade game to a brand new, and untested, console. Nasaya Nakamura, the chairman of Namco, now has the perfect platform with which to get back at his old adversaries Hiroshi Yamauchi and Nintendo (who, it must be remembered, unveiled the ill-advised Virtual Boy just two weeks before Sony's machine went on sale).

Even Sega's Saturn, which so impressed everyone when it arrived weeks ago, now faces the most daunting of battles with a limited supply of worthy software.

The PlayStation — and Sony — have arrived. And everybody else had just better take notice.

Welcome to **NEXT Generation.**

.....

NEXT

GENERATION

March 1995

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NEXT Generation (ISSN# 1078-9693) is published by GP Publications, Inc. Suite 210, 1350 Old Bayshore Highway, Burlingame, CA 94010, USA. Application to mail at second-class postage rates pending at Burlingame, CA, and at additional mailing offices. Newsstand distribution is handled by Curtis Circulation Company. Subscriptions: one year (12 issues) US \$29, Canada: \$39. Canadian price includes postage and GST (GST# R 128-220468). Outside the US and Canada, add \$15 per issue. For customer service, write GP Customer Service Dept., Suite 210, 1350 Old Bayshore Highway, Burlingame, CA 94010, or call 415. 696. 1661.

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Produced in the United States of America.

NEXT Generation is affiliated to and shares editorial with EDGE, a UK-based magazine from Future Publishing. Eternal gratitude goes to Jay, Cez, Jaz and, erm (um), goodbye Boz. Love to Tim Tucker. Respect to Gary the 'Gladiator.' Remember: Everything begins with an E. Oh, and click click click.



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Is Sega's boss scared yet?

Back in 1990, few believed that a small, hungry rival could beat the mighty Nintendo on the 16bit punch. But that's exactly what happened. Now, Sony threatens to do to Sega what Sega did to Nintendo, and Tom Kalinske faces the toughest fight of his career...



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Does PlayStation live up to the hype?

The wait is finally over: The PlayStation has landed. But what's the story behind Sony's leap into the world of videogaming? And how does the machine actually perform? NEXT Generation tells the story behind the headlines and profiles Ridge Racer on page 42



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What's wrong with the PC?

The PC is the grudging game machine: It's expensive, it's frustrating to use and it's riddled with incompatibility glitches. Now, as Sega and Sony threaten, does the PC game scene face death — strangled, partly by the very standards that defined its creation?



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Making tracks (aka the noble art of game music)

As the gaming industry's migration from cartridges to CDs reaches culmination, many musicians are yearning for the good old days. **NEXT Generation** discovers that less is often more



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Virtua Fighter — Saturn's fighting chance

Of course, PlayStation isn't the only hot new Silicon ensemble. Sega's Saturn is outselling Sony in Japan, and this success is attributable to just one game — Yu Suzuki's awesome *Virtua Fighter*



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Games, games and more games. The question is, which are the best? **NEXT Generation's** team of dedicated, unbiased reviewers round up the month's releases, starting on page 88

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Tom Kalinske talks candidly about 32X, Saturn, Sony, Nintendo, 3DO, Jaguar and the battle ahead for Sega

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Making tracks (aka the noble art of game music)

Often ignored, game music is nevertheless a crucial factor in a game's success or failure

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Virtua Fighter — Sega's fighting chance

A four-page profile of Saturn's main draw: a near-flawless conversion of AM2's prize fighter

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Next Month...

We'll be four months old on March 21st. Hey, this cool and we've barely started crawling!



BATTELMORPH™ This much-anticipated 3-D sequel to Cybormorph has a killer new twist. You can seek out new worlds underwater and underground. Available 1st quarter.



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Game tips and hints: 1-800-73-ATARI, 95¢ per minute. If you are under 16, be sure to get a parent's permission before calling. A touch-tone telephone is required. USA only. Atari Jaguar information is available in the Atari Gaming Forum on CompuServe. Type GO JAGUAR to access this area 24 hours a day. Atari Jaguar information is available in the Atari Roundtable Forum on GEnie. Type JAGUAR to access this area 24 hours a day. ATARI, the Atari logo, Jaguar, the Jaguar logo, Jaguar CD, VLM, Virtual Light Machine, Battlemorph are trademarks or registered trademarks of Atari Corporation. Copyright 1994, Atari Corporation, Sunnyvale, CA 94089-1302. Made in the U.S. of domestic and imported components. All rights reserved. All other trademarks and copyrights are properties of their respective owners. Dragon

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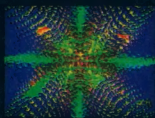


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**"I'm ready for Sony, sure.
I look forward to
the battle"**



Sega of America's President & CEO (and Tom Kalinsko) contemplate the battle ahead outside Sega of America's corporate HQ in Redwood City, California

He did what Nintendo't! He brought videogaming out of the closet! He sold more 16bit game machines than anyone else in the world! He's Sonic's manager! He created the Sega generation! He fought Senator Lieberman! But now, Tom Kalinske, President and CEO of Sega of America since 1990, faces his toughest battle of all, and **NEXT Generation** wants to know...

Is Sega's boss scared yet?

Sega wasn't always the videogame giant it is today. Back in 1990, Nintendo seemed indestructible. The mighty NES had conquered the world, and no one would have believed that a small rival — with its roots in the pinball industry — could beat the 'Big N' to the punch with a 16bit gaming system. But that's exactly what happened, Nintendo never caught up after Sega's head start with Genesis and the rest is history...

Tom Kalinske is the man who led Sega of America's transformation from 8bit David to 16bit Goliath. But now Sony threatens to do to Sega what Sega did to Nintendo, and for the moment, Sega is pinning much of its hopes on 32X as the weapon to fend off the looming PlayStation. But what else has Sega's boss got up his sleeve for the battle ahead? Is he confident? Is he scared? When will US gamers see Saturn? **NEXT Generation** met with Tom Kalinske the week before Christmas — the first true test of 32X's popularity — to find out.

Turn on hold

NG: Just as Sega Japan rolled out Saturn, Sega USA put all of its resources behind the launch of 32X instead. Does this betray any lack of faith you may have in Saturn as a product?

Tom: No, no, I love Saturn. For me, it's a magnificent product. It just all comes down to price, and right now it's not a mass market item. Now, I was in Japan for the launch of Saturn and it was selling out just as fast as it was arriving in the stores. I'm amazed at how they manage to sell so many of these machines at what are considerably very high prices.

But the US is a very different market than Japan and we at Sega USA recognize the importance of proper pricing.

NG: So US gamers have got 32X instead. As you know, **NEXT Generation** has doubts as to

whether 32X is a wise move: It stretches Sega's resources, it has to be a distraction to the US launch of Saturn and — in all honesty — it's not really that good. Can you further explain your thinking behind its launch?

Tom: Sure. One thing that people involved with publications don't appreciate (to the degree that we, at Sega, appreciate) is the price point importance to the mass market in this country. The US has always been very, very price driven. To sell huge units of anything, be it TVs, VCRs, cellular telephones — it doesn't matter what — the price must be right.

Now, I can sit here and tell you today that no matter how great Saturn is, or PlayStation is, or Ultra 64 is, we will outsell them by an enormous amount with 32X — simply because of the price. The technology of 32X happens to be good, but the price point is so important in the US market that how good it is really doesn't matter. We've got to have a product out there that the consumer can afford to buy in Wal-Mart, Target, Sears and all these other places. The thought "Let's upgrade the 16bit Genesis they already own to a 32bit experience" was the most logical one to us.

NG: And this is as opposed to starting over with an entirely new machine?

Tom: Sure. Now, later in the year we'll have Neptune out (a combined 32X/Genesis machine) which is a stand-alone system for new people coming into the market or people who have owned an alternative system and want to come over. But again, the idea will be to keep the price point reasonable enough for 98% of Americans for whom price is important. And essentially, that's the real reason behind 32X.



Although Sega of America was founded in 1986, the original Sega was founded in Japan by David Rosen — an American — in 1954 as 'Service Games Co.' for the purpose of developing amusement-type machines

talking



"I want to have 10 great titles at launch and it's this that will determine Saturn's release date"

NG: So you're saying that there's a price boundary above which something won't sell?

Tom: There's a huge boundary. In fact there are several. The first magic price point is \$300. If your product costs more than \$300, then your market is very, very limited. Take audio CDs, you know they never sold over one million until they got below \$300? The same is true for videogame machines. That's why 3DO hasn't been successful.

It then goes in \$100 blocks, so the next would be \$199 and then after that \$99. And this is the current status of the 16bit business and it's a great place to be. Nintendo and ourselves are both selling huge, huge numbers of units.

NG: Would you presumably like to see 32X at a price point of under \$100?

Tom: Sure, that would be great. But I don't think it's very realistic.

Kalinske, the Gamer

NG: Do you play games yourself, Tom?

Tom: Yep.

NG: So as a gamer, how do you personally rate the 32X games available so far?

Tom: Well, ahh. You know, I... The one I like best is *Doom*, that's personally one of my favorite games. And I think it's fantastic that it's the complete game. As I'm sure you know, on one of the other systems, there's no sound. I can't imagine a game without sound. It would be like watching a movie with the sound turned off.

But obviously I have to play *Doom* by myself. In my family setting I'll probably play *Star Wars* and my daughters are big fans of *Virtua Racing*. And I think that some of the titles coming along will be fantastic. I think, um, *Metal Head* will be great and I happen to think that our golf game...

NG: Can you remember the name?

Tom: Oh yeah! (laughs) *Golf Magazine*, *Freddy Couples*, *36 Greatest Holes*... that has to be the longest title. And I know that in the future there are several games coming along that I like a lot.

NG: OK, sure. I don't think anyone would argue with the choice of initial 32X games: There's no mistaking the pedigree of *Doom* or *Virtua Racing* as titles. But do you really think they're impressive from a technological point of view? Let's take two of the titles you mentioned: *Doom* may have the full soundtrack (which should be a given — that's nothing to brag about), but the action isn't full screen and *Virtua Racing* is barely distinguishable from the Genesis version...

Tom: Actually I personally think *Virtua Racing* is a big improvement — you've got plenty more game options, and...

(Pause.) But you've got to remember that these are just the very first titles. Do you remember the titles that we first introduced Genesis with, *Altered Beast*? The improvements that you make from your introductory titles are enormous. And the 32X titles coming out in March and April will be fantastic. Internally, we have seen things that we're working on where 32X titles are beginning to look just as good as the Saturn games.

NG: Can you name any titles?

Tom: Well, I can tell you one that doesn't quite get there, but will be a huge seller and that's *Virtua Fighter*. It will be a terrific title.

NG: Will it (ahem) make up for *Cosmic Carnage*?

Tom: Well, you know, every now and then there are games with which we're not so happy... It's all part of the learning process.

NG: So what life span are you looking at for 32X?

Tom: I think three or four years. Looking at Genesis in 1994, between ourselves and Nintendo we should sell through 9.5 million units of 16bit hardware. Next year, we expect this to drop by about 35% which still leaves a very big number, and even if it drops further in 1996, it's still a very respectable market. So, as long as you have a decent market on Genesis, there's going to be an even bigger market for 32X, trailing a little behind. So 32X will be big for three or four years.

Sega's biggest launch ever

NG: So when will Saturn launch in the US?

Tom: We haven't started yet. I mean, you know, we're in great shape for the launch. *Virtua Fighter* is a phenomenon in Japan, and over here, too (I love the game, I actually have an arcade unit at home), and we'll be able to launch with both this and *Daytona Racing*, so we're in great shape. Having said that, as with the launch of 32X where I wish we had more titles, I want to have 10 great titles at launch and it's this that will determine Saturn's release date. I'm still assuming that it will be the (latter) half of 1995.

NG: Sega pioneered the concept of cool, stylish brand advertising in the videogame market. As a result, you've created a 'Sega Generation' of diehard Sega fanatics who won't play any other system. Now, these gamers are being pointed in the direction of 32X instead of being kept on a back burner anticipating the launch of Saturn. Is there now a danger that Saturn will launch with no 'instant buyers' to help it through its infancy?

Tom: As I said, we certainly intend to sell more 32Xs in 1995 than Saturn machines. And it's not just because we make more money on 32X, but because we think we owe it to the audience of Genesis owners to give them an upgrade path at a respectable and a reasonable price.

And no, I don't think there's any risk. Once we get a chance to explain the whole product portfolio and once we're able to delineate this to all our customers — which we haven't been able to do because Saturn isn't available yet — then hopefully they'll see that what we're trying to do is to provide something for every pocketbook.

NG: How much of your plans for Saturn's launch are dependent on what Sony does with the launch of the new PlayStation?

Tom: I can't do much about exactly how they're going to price PlayStation. As you know, in Japan they are about \$50 (\$5000 - \$6000) cheaper than us, and last weekend I talked to a number of Japanese retailers and, although it was the first weekend of PlayStation's launch, we were still outselling them at a rate of around 5:3, in general.

So we have to assume that the same kind of pricing holds true here, and that there's not much I can do about it. I can't really react a heck of a lot to their lower price, I have to market on the basis of having better titles instead.

NG: Sega Japan's president, Mr. Hayao Nakayama, has been quoted as saying "Sometimes we will win and sometimes others will win. For certain we will survive. Whether as number one or number two I don't know." This is a very atypical statement for a Japanese businessman, and is — if not exactly defeatist — certainly extremely honest. Are these the words of a frightened man?

Tom: Oh no. Nakayama-san has never been frightened in his life. I think he was just being humble. And, I believe, if you were to ask him now, I think he would tell you that Sega is clearly winning the battle with Sony and that he's happy with the current situation.

NG: How much is 32X preventing you from dropping the price of Saturn? Because if you truly believe and want 32X to be a mass market item, then you can't tread on its toes in terms of price.

Tom: It's not stopping me at all. I'd love to drop the price of Saturn, but its price is dependent on a physical cost and that's why it's been marketed at \$44,000 (\$450) in Tokyo.

NG: Will the Saturn unit that's released in the US be exactly the same — under the hood, that is — as the Japanese version?

Tom: Yes, exactly.

NG: And what price will it be launched at?

Tom: We haven't announced yet. But you know how prices usually translate from Japan to here...

NG: So we're still looking at an initial price of around \$450. You say your hands are tied in terms of price, but prior to the launch of Saturn and PlayStation in Japan, our Tokyo correspondents reported fierce competitiveness

between the two companies.

Both held back on prices, kept shifting release dates, and both kept their cards very close to their chest. Can we expect the same level of cat and mouse rivalry for the US launch?

Tom: I imagine. (smiles.) In the case of Sony we're going to keep a lot of things as quiet as possible until we spring on them, and I'm sure they will do exactly the same as us.

NG: So you're ready for Sony?

Tom: I'm ready for Sony, sure. I look forward to the battle.

No longer the underdog?

NG: 32X, Genesis, Sega CD, 32X CD... plus Game Gear, plus Saturn — that's...

Tom: ...I know, a lot.

NG: One of Sega's product managers for Sega CD told

NEXT Generation that it's

been very difficult to inspire teams — to gear up their enthusiasm to work on Sega CD games when they could be playing with the sexy 32bit stuff. Now, on the one hand, you say that it's the 16bit games that are mass market and your main focus, but on the other hand it looks like development for Sega CD is in severe danger of being sidelined. So are development resources being spread perilously thin?

Tom: I don't think so. As you know, we have expanded here since the creation of the Sega Technical Institute. We have more than 350 people and although our main focus remains on Genesis, our people are evenly spread on all the systems, at least now in the first quarter of 1995.

NG: But there can only be one 'A' team — there can only be one, best team. What platform are Sega's hotshots working on right now?

Tom: In Japan, the A team is AM2 and they've been working on *Virtua Fighter 2* and getting that done. They're also working on versions for Saturn and 32X. But in the US I think we have — I hope — a number of A teams, and one of our primary focuses has always been on sports, so we're looking at keeping a lot of attention on making the best sports games we can.

NG: So, is Sega now a big enough company to do this type of multiproduct business?

Tom: Absolutely.

NG: OK, but still, as a big successful company, the flip side of the coin is that Sega is no longer the underdog it once was. Isn't there the danger that the same conditions that made Nintendo vulnerable to a lean, hungry, fast-on-its-feet competitor four years ago now make Sega vulnerable in 1995?

Tom: I still feel — and I think most of us here still feel — like an underdog. (Smiles.) I don't know why, I've never overcome the sensation that



Sonic and Knuckles are worth more to Sega than the CEO himself. Sonic is recognized by more US children than either Mickey Mouse or President Bill Clinton

"I've heard that since both Sony's machine and Saturn are out, sales of 3DO have stopped dead"



Toy industry veteran Tom Kalinako, former president of Mattel and Matchbox Toys, joined Sega in 1990

talking



Sonic personifies Sega's success with the Genesis. "I love the little guy" confesses Kalinske. But will his appeal last?

they're about to pounce on us at any moment! And we're up against bigger competitors, so how can we not be the underdog? We're up against Nintendo which is a substantially bigger company and has much more cash in the bank. We're up against Sony and god knows how much cash it has in the bank. So we have to keep feeling that we're the underdog and keep operating in that way.

The bottom line is that the two things we do very well are make great games and then market them very successfully. If we can

continue to do this (and we will), then we can compete with these guys.

NG: You mention *Virtua Fighter* and *Daytona* for Saturn, while *Virtua Racing* and *Super Star Wars* are two of 32X's main attractions. Sega's arcade heritage is really paying off, right?

Tom: Oh yes, it really has. The great thing about our arcade business is that it's like having a huge test market. There are a lot of arcade games that aren't huge hits, and you don't see those translated to the home world. What you see are the huge hits, and this is a tremendous benefit.

On the competition...

NG: What is your opinion on your competitors? What do you think are the strengths and weaknesses of those offering rival systems? To start with, let's take 3DO as an example.

Tom: I've been very consistent on this subject. While I happen to like Trip Hawkins very much as a person, I don't think the (3DO) strategy has worked and I don't believe he will ultimately be successful. Everyone recognizes the sales of under 100,000 (units) in the US as a failure. I've heard that he has sold 150,000 in Japan, but I've also heard that since both Sony's machine and Saturn are out, sales of 3DO have stopped dead. Since last weekend when I was in Japan, the 3DO machines have moved to the back corners of the shop — they are not on prominent display any longer — and I think this is an accurate indication of the unit's new status; it simply doesn't compete with the new machines.

NG: So you believe that (in Japan at least) 3DO's window of opportunity has just slammed shut.

Tom: Yep, it's now passed by.

NG: How about Atari's Jaguar?

Tom: I don't believe the current Jaguar is powerful enough to compete with the new machines and there's not enough great software out there to support it. Recently Atari has done a

better job of getting some decent games out, but it's not enough to save it. It's too little too late.

NG: What is the current relationship between Atari and Sega following the patent settlement?

Tom: We're certainly friendlier! We're a stock holder in the (Atari) company and we have both agreed to cross-license from each other. So, we are looking at the library of old Atari titles and seeing if they make any sense for releasing on any of our platforms, and they are looking at some of our titles to see if they make sense for Jaguar.

NG: Can you name titles?

Tom: No, actually nothing has been decided yet.

NG: Neptune, when launched, will be competing toe-to-toe with Jaguar, both are cartridge-based machines priced at around \$200. How do you think Sega's machine will compare?

Tom: Well, our big advantage is the enormous library of existing games with more on the way.

NG: We all hope so. What about Sony?

Tom: I don't know anything of Sony's US plans, the company certainly isn't confiding in me what it has up its sleeves! I've heard a lot of different rumors, and of course I respect Sony for what it

is: a very strong, big, high-tech electronics company. But Sony has failed a few times with consumer products — we all remember Beta — and so we're all hoping that PlayStation turns out to be another Beta and that in a couple of years' time, together, we'll be able to tell people to play their Saturns on a Sony TV.

NG: The Beta analogy is mischievous, because Beta was actually technologically superior to the VHS system which overtook it...

Tom: Yes it was, but it wasn't successful.

NG: You'd rather be successful than superior?

Tom: Hmmm. I'd like to be both.

NG: Last, but not least, how are you faring right now in the battle with your old rival Nintendo?

Tom: Who? (laughs.) The current battle is being fought between Genesis and SNES for 16bit superiority and we're still beating it in share of market and there's nothing that it could have done to overtake us this year. Nintendo did a good job — and I must give it credit — on *Donkey Kong Country*, and the company did a great marketing job. But even with that, we will outsell them on both hardware and software this year. It did have one good title though.

NG: What about Ultra 64?

Tom: In terms of Ultra

64, I just don't believe in the long-term health of a high-priced, cartridge-based business. I think that at some point you have to convert to CD-ROM. I know they claim they have wonderful compression schemes, but we have these too — everyone has wonderful compression



No one believed in 1990 that this character could topple Nintendo's Mario

"I don't know why, I've never overcome the sensation that (Nintendo) is about to pounce on us at any moment!"

schemes. The bottom line is that you end up with these high MB cartridges that cost a vast amount of money. The price ends up to be too much to the consumer and the revenue ends up too small for the third party manufacturer or, indeed, the parent company itself.

So I think that Nintendo's current strategy for Ultra 64 is incorrect and may in fact be subterfuge — maybe they really are planning on bringing out a CD drive for Ultra 64 and that will bring the price of Ultra 64 up to the same price as everyone else's machines. The other problem is, of course, how are you ever meant to do more than what you're doing today on cartridges if you don't move to CD? How do you ever really incorporate the wonderful things you can do with film, special effects and Silicon Graphics computers if you don't move to CD-ROM?

The most violent game of all time?

NG: *Eternal Champions* CD is certain to be the most graphically violent home videogame ever, but its release is absolved by the fact that it carries a MA-17 rating. Do you think that the efforts of Senator Lieberman et al. in fact backfired, and these unenforceable ratings simply legitimize an increase in the amount of videogame violence?

Tom: I don't think so at all. I think that the level of violence is probably less because a lot of people got scared off when this investigation, and the negative publicity around it, was occurring.

On the other hand, what it legitimized was the recognition that this is a very wide audience, people have different tastes and as an industry, we should be allowed to produce games for it.

NG: But you guys are smart marketing men. You know full well that there's nothing sexier to a teenager than an 'adults only' label on a box. Kids are still playing these games, am I right?

Tom: To some degree. When I was a teenager I remember trying to sneak into movies my parents didn't want me to see, and I wasn't successful all the time. But when you're talking about a purchase of \$50 or more, then most of the time the parent has a hand in the decision for the younger child. Therefore, the ratings — as a means of providing reliable information for the parent — are a useful thing. It's as important for our industry as it is for the movie industry.

New Horizons

NG: How does the Sega Channel fit into the bigger picture of Sega's long-term plans? Is the goal to eventually replace cartridges and CDs with games on demand via cable?

Tom: No. The latest research shows, aside from the fact that a lot of people want to sign up for it, people who sign up for The Sega Channel buy more software at retail than people who don't. Now, is that a chicken or an egg? We don't know.

NG: The Sega Channel is pioneering, but its life span is limited because it's not interactive: it's just a constant supply of games into the home with no feedback from the 'viewer.' Nintendo has plans for its Gateway system, 3DO is heavily involved in its US West trial, both of which are fully interactive systems. What is Sega doing to get onto the interactive information superhighway?

Tom: The Sega Channel is only limited because it's here today using today's technology. And certainly we're very interested in the future of gaming networks. We've been big supporters of XBand and we hope that it will grow to be a successful, low-tech solution to interactivity.

Aside from that, you have to wait for the infrastructure before you can do it properly. It won't happen next year or the year after. I think we'll really have to wait until at least 2000 A.D. before the infrastructure is in place.

NG: So how else is Sega going to expand the videogaming market? Almost every male teenager in the country is a player, but if your business is to continue growing then you need to attract a wider audience. How are you going to do this?

Tom: Yesterday I looked at the first commercial we've specifically targeted at women. It goes into advertising research this weekend and we hope to have it on the air in early 1995. But you're right, we have to find a way to get women playing videogames and obviously there are a number of problems that you have to overcome.

First, for a lot of women playing against a male is very intimidating — you know the guy is going to beat the hell out of you and you won't stand a chance. Second, we have to provide gaming experiences that are more enjoyable for women.

Now, 25% of the players on The Sega Channel — during our tests — were women, which is significantly higher than the percentages of ordinary home systems, in which there are just between 15% and 20% women. What that's said to us is something that we've known all along: Women and girls want to play videogames, but there's something intimidating about the current experience that doesn't encourage them. There's a big opportunity there. We're targeting the older market quite well already. We

think the key is sports, and we figure that the more realistic we make them, the wider their appeal will spread to an older and older audience.

NG: To what extent will the Sega Saturn be targeted at these newcomers?

Tom: Although the majority of our sales will initially be to experienced gamers, we expect Saturn to attract an older audience. I wouldn't be surprised if everyone was over 18.

NG: Because they're got all the cash...

Tom: Absolutely.



"The bottom line is that the two things we do very well are make great games and then market them very successfully"



think the key is sports, and we figure that the more realistic we make them, the wider their appeal will spread to an older and older audience.

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Tom: Absolutely.



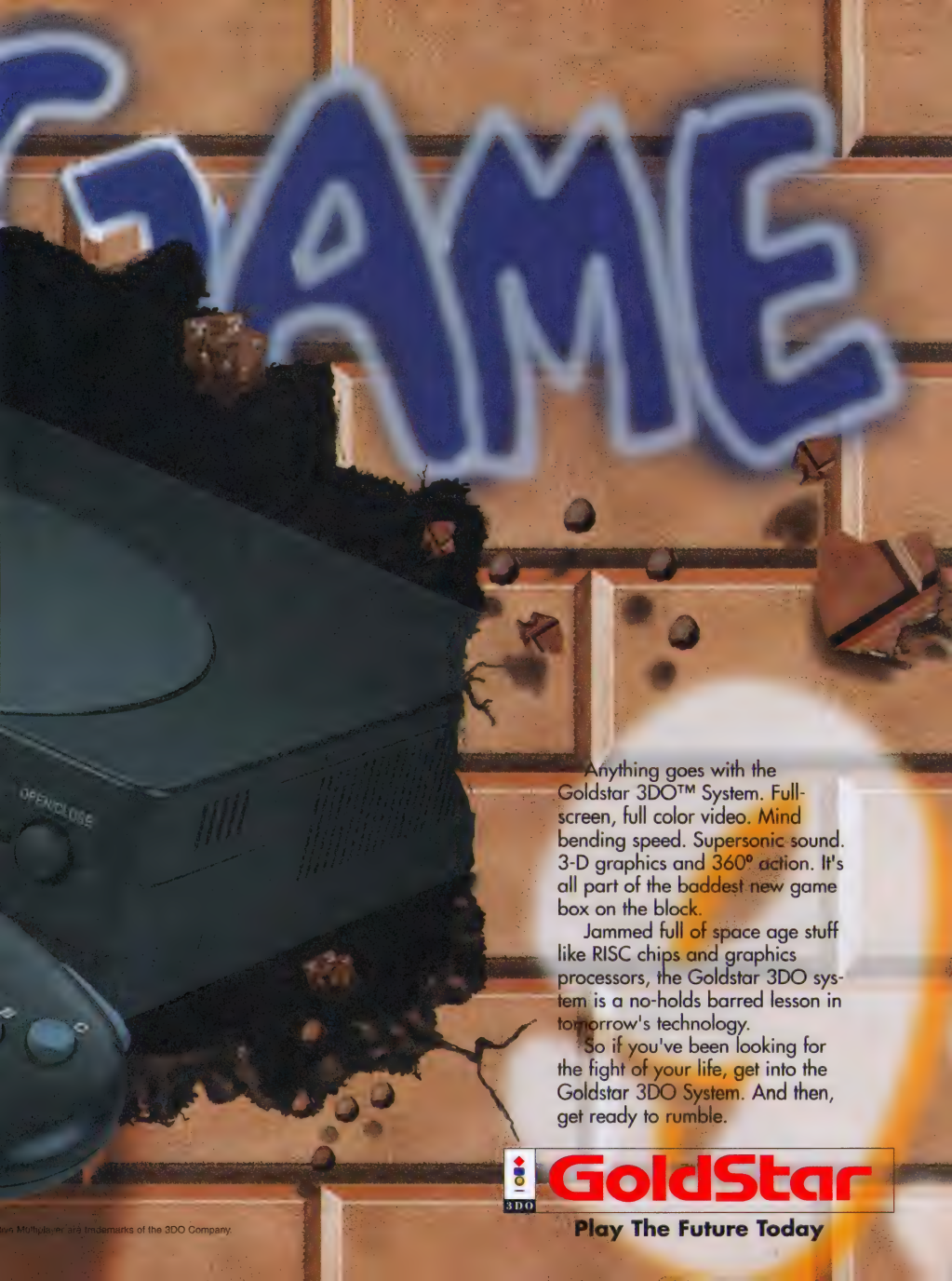
NEXT MONTH

One of videogaming's founding fathers discusses then, now, good games, bad games and the way forward for gaming.



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Play The Future Today

Winter CES: The calm before the storm/p 14 • **Virtual Boy:** Nintendo's new 32bit machine/p 20 • **Saturn and PlayStation:** Sega and Sony sell their dream machines/p 22 • **Video CD:** High Density CD (HDCD) attracts big names/p 27 • **Sega is still on top of Japanese arcades:** *Virtua Fighter* confirms Sega's position in the arcade arena/p 30



The hottest global news affecting the games you play

WCES: the calm before the storm

The world's largest game show is still too soon to sort the winners from the losers...

With its incessant ringing of slot machines, indigestible 'all you can eat for \$2.99' buffets and culturally bankrupt (allegedly) nightlife, Las Vegas is the undisputed hedonist capital of the world. It's also the unlikely annual venue for the Winter Consumer Electronics Show, which took place in early January at the city's colossal Convention Center.

The game industry's part in the Consumer Electronics Show has grown over the last few years from 15% to almost 30%, with many exhibitors



Las Vegas CES: The greatest (gaming) show on earth



The US's fastest growing city, and home for six days

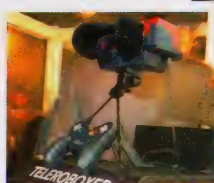


Nintendo securing the largest single booth and boasted that worldwide, *Donkey Kong Country* grossed more revenues than all Saturn and PlayStation business combined

Highlights

The show stoppers:

1. *Toh Shin Den*
2. Sega's ham croissants
3. The NEXT Generation party's bar tab
4. Seven chips on '23'
5. Delphine's *Flashback 3*
6. Rocket Science taking it in good sport
7. *Virtua Fighter 2*
8. Shigeru Miyamoto doodling Marios on NEXT Generation party invites
9. Penn & Teller (& Id)
10. Teasing *FX Fighter*



Virtual Boy's display featured just two semi-completed playable demos

"Is this really a Nintendo product?" seemed to be the standard response from conferences at the Virtual Boy stand. The jury is still out on Nintendo's chances of making it mainstream with a product packing merely novelty value

relegated to taking hastily-erected space inside tents at the rear of the center. This

year's show, while notably quieter than the summer event in Chicago, was perhaps the most disappointing of recent years. Whether this signals a period of stagnation or merely a calm before the storm in the international game community is open to debate.

Next-generation hardware lurked in the shadows far from the prying eyes of journalists and retailers, while new and exciting games were genuinely hard to find.

Big space exhibitors

Sega and Nintendo were conspicuously devoid of big-name titles. FX2-powered *FX Fighter*, the laughable lovechild of an ill-advised union between Nintendo and

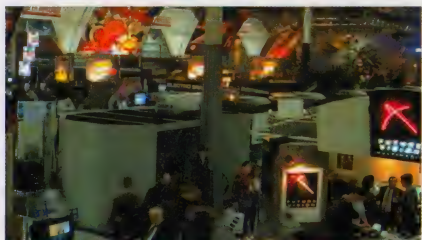
GTE suffered in every department and even *Starfox 2* — Nintendo's attempt to maintain interest in the SNES — didn't make up for it. Somehow, despite a wider variety of play mechanics, the prototype game seemed to lack the immediate appeal of its predecessor, relying instead on free-roaming levels (à la Argonaut's aging polygon shooter *Starglider 2*).

And those Super FX polygons are unlikely to draw too many gasps. Another unimpressive Super FX game was *Comanche*, converted from the PC game and using the same Voxel-based graphics. Sadly, the low resolution

NEXT Generation spoke at length with NOA chairman Howard Lincoln and was assured that the system (Ultra 64) was on schedule and would still meet the target price of \$250

What is it?

Perfect in 1948, this invention not only had a profound impact on computer technology but revolutionized the electronics industry as a whole. Without it, home computers would have remained an impossible dream



Sega's stand was compact yet busy (top). Nintendo, however, dominated the floor nestling many of its third parties under its wing (bottom)



CES isn't held just for videogame journalists, it's mainly for game producers to show and sell their products

breaking

made for an extremely chunky graphic display on the SNES.

Sorry Nintendo, but you've only got yourself to blame: After raising the stakes with *Donkey Kong Country*, it's impossible to go back.

Nintendo's only hardware on show was the Virtual Boy which had been previewed at the Shoshinkai show (see page 20). Unlike the Japanese show, Nintendo chose to make the Virtual Boy accessible by appointment only. A long line of expectant delegates queued to enter a room where new software projects were previewed on large screens with the aid of a cardboard viewer held to eyes. They included a 3D wireframe shoot 'em up, a racing demo, a side-on Mario game, and a version of *Gunhead*. Encouragingly, the system's 3D graphics abilities were far better demonstrated by this new crop, with effective use of depth used in 2D titles, especially the ability to traverse different layers of the screen. The system proper could be played in another room, but with only two titles, *Telero Boxing* and *Space Pinball*.

The Ultra 64 was typically cloaked in secrecy. Despite claims that the chipset had been completed this month, the company's only gesture toward the creation of its next-gen platform was the announcement of a 'Dream Team' of development partners including SGI, Alias Research, Rambus, MultiGen, Rare, Williams, Acclaim, Paradigm, Spectrum Holobyte and DMA Design. **NEXT Generation**

it is...

The transistor. Smaller and more efficient than the electron tubes (valves) it replaced, the transistor paved the way for the development of integrated circuits, which allowed huge computing power to be packed onto tiny pieces of silicon



Namco kept *Ridge Racer* behind closed doors. Instead, *Weapon Lord* was its main focus (top and top right). Developers' tools were also in high demand (right)



spoke at length with NOA chairman Howard Lincoln and was assured that the system was on schedule and would still meet the target price of \$250.

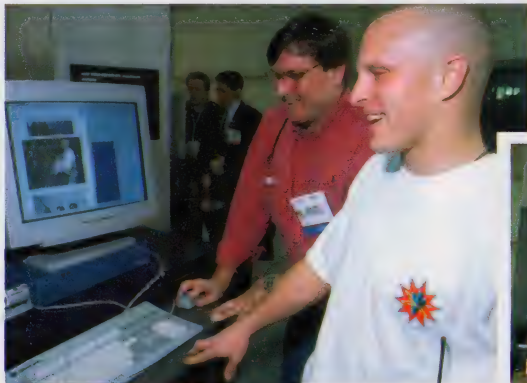
This is contrary to rumors of internal wrangles between Nintendo and SGI over the price of the chip (SGI has allegedly set a price of at least twice what Nintendo is prepared to pay). SGI certainly wasn't talking: When will Ultra 64 be released? "No comment"; will there be a CD-ROM drive? "No comment"; Any news of a joypad design? "No comment"; how about networking capabilities? "No comment." You get the picture...

Sega was naturally geared up to pushing its fledgling 32X format as well as a 16bit line-up. The announcement of Neptune (a 32X/Genesis combo, as reported in NG 2) confirmed that Saturn wouldn't be the only other new piece of Sega hardware arriving in 1995, although the selection of titles on display (*Space Harrier*, *After Burner*, *Motocross*, etc.), did little to spur interest in the currently

Character assassination

Want your new game character to stand out from the crowd? Want to endear your pixelated pal in the hearts and minds of gamers the world over? Well here's NEXT Generation's post-CES guide to descriptions we've all heard quite enough of already...

1. Zany
2. Wise-crackin'
3. Streetwise
4. Wacky
5. 'With-an-attitude'
6. Screwball
7. Off-the-wall
8. Side-splitting
9. Offbeat
10. Goofy



Alias was coolly showing off its latest creation: a software package that enables computer animators to accurately create computer-generated, rendered hair. Big deal? When was the last time you saw a game character with a decent hairstyle? Hats off to Alias...





While Nintendo can't be accused of resting on its laurels (Virtual Boy is new), it can be accused of gloating. 94's DK was loud and proud (above)

unproven format. To try and bolster **NEXT Generation's** confidence in the format, Sega granted a sneak preview of 32X development work undertaken by the talented developing group Scavenger — If anything, the results showed that the format has potential when used properly.

Sega emerged slightly more willing to talk about the Saturn this time around. At the back of its private suite, a Japanese machine played *Virtua Fighter*, and the surrounding walls were decked with reminders that the rest of Sega's coin-op lineage was also Saturn-bound.

Curiously though, on the first day of the show the solitary Saturn was seen side by side with a Sony PlayStation running the 3D shoot 'em up title, *Crime Crackers*. A few hours later, though, it had disappeared. Presumably, the rival system was whisked away after someone arrived with a copy of



Nintendo's new *Dr. Mario* proved that you can't keep a great game idea down



Seemingly the eye of an electronic entertainment storm, Acclaim's offer of a real ball with a real hoop was hard to resist (above and right). Even **NEXT Generation** won a T-shirt

Toh Shin Den, suggesting it would have made for a fairer comparison.

The rivalry between Sega and Sony continued offsite on a completely different level. At the Alexis Park Hotel — traditionally Sega's own CES

breaking

playground — newly found Sony Computer Entertainment checked into schmoozing suites with every intention to make their upcoming rivals feel more welcome than usual. Huge balloons adorned the slogan 'Sony welcomes Sega to WCES' were suspended above the swimming pool (in which a Sonic took an unintended swim) and SOA's president Tom Kalinske was delivered a complimentary drink on a serviette reading the same. Of course, such tomfoolery was taken in good spirit by Sega, but quite rightfully, Kalinske insisted that Sony would have to

watch their backs at the upcoming Summer E3 show in Los Angeles...

While Sony's show presence was limited to a tiny booth occupied by Sony Imagesoft, the audio and video division made a highly technical demonstration of its (and Philips') new DVD high-density CD standard (more next month) to the press at the showbusiness hotel Bally's. With the help of some proprietary development hardware the results were remarkably impressive, approaching Laserdisc quality and reaffirming **NEXT Generation's** doubts over the future of Video CD (see page 27).

Atari, whose presence at CES has grown over the last few years, was focusing on introducing new software and also previewing its CD drive for the Jaguar, which goes on sale in February. Despite some impressive video footage that almost approached MPEG quality playback in software, the most glaring omission was any worthy software. ATD's *Battlemorph* was apparently too incomplete to get the go ahead, while their other project, *Blue Lightning*, did make it out but failed to set the show floor alight. Once again, Jeff Minter's



Sega did three things very, very right: 1) Crammed two *Virtua Fighter 2* arcade machines into its booth (above). 2) Offered visitors ham croissants to die for; 3) Turned off 32X and turned on the 486s vs Bears playoffs Saturday

Data stream

Marketing budget for Magic Carpet: **\$307,600**
Marketing budget for Donkey Kong Country: **\$3.76 million**
Percentage of targeted US adults and children who are expected to have seen the PVC ads three times: **70%**
Marketing budget for Microsoft on updating its image: **\$9.23 million**
Percentage of CD-ROM sales accounted for by Microsoft: **11.41%**
Number of formats Rise Of The Robots is to be released on: **22**
Number of units 3DO claims to have sold: **500,000**
Present value of the videogame market: **2.076 billion**
Projected value of the videogame market by year-end 1995: **\$20 billion**
Growth in the videogame market over the last 15 months: **67.5%**
Increase in videogame sales caused by half-term holidays: **20%**
Estimates of annual cost to industry caused by piracy: **6.15 million**
CD-ROM access time required to comply with MPC2: **400ms**
Typical hard drive access time: **11ms**
Price recently offered for 156,931 aging game carts: **\$307,600**
Dimensions of a 35 mm film screen: **20x35ft**
Dimensions of an IMAX screen: **80ftx100ft**
Number of IMAXs in the world: **115**
Number of PlayStations available at launch: **100,000**
Number of defective Saturns that have caught fire: **10**
Cost of a single game of Virtua Fighter 2: **V200 (\$2.10)**



Atari's Jaguar display remained busy throughout, a giant video wall displaying Jaguar's latest titles — *Val d'Isoire Skiing and Snowboarding* was the surprise pick of the bunch (left)




The Jaguar CD failed to spark spectacular interest, but some killer games are 'promised' for launch...

efforts paid off, though, and his *Virtual Light Machine* which comes packed into the Jaguar CD's hardware unit delivers a psychedelic enough experience for any audio CD-playing, Jaguar-owning hippies.

The cartridge software line-up for the Jaguar was depressingly ordinary, though. More than anything, (*Doom* and *AVP* aside) Atari's games simply didn't look any different from most of the

other 16bit console games.

Behind closed doors, Atari unveiled a prototype model of an all-in-one Jaguar and CD drive. Suffering from the American school of consumer product design, the system looked more like an 1980s set of bathroom scales than a console (perhaps to accompany the apparently toilet-inspired CD add-on itself), but then the Jaguar wasn't exactly blessed with flattering lines...

In all, a disappointing show — a show hampered by an abundance of people keeping cards far too close to their chests. But, not to fear, Los Angeles' E3 (the Electronic Entertainment Exposition) later this spring should see a different story unfold. And **NEXT Generation** will be there with a full report. 

What is it?

Perfected in 1948, this invention not only had a profound impact on computer technology but revolutionized the electronics industry as a whole. Without it, home computers would have remained an impossible dream



SNK happily showed off with Neo Geo CD...



...while back at Sega, 32X's CD-capabilities were shown for the first time. The industry's transition to CD is almost complete

breaking

Nintendo pins hopes on Virtual Boy

But the ill-advised 32bit VR system simply makes gamers see red

it is...

The transistor. Smaller and more efficient than the electron tubes (valves) it replaced, the transistor paved the way for the development of integrated circuits, which allowed huge computing power to be packed onto tiny pieces of silicon

The November unveiling of the Virtual Boy in Japan signifies an important change of direction for Nintendo. Either it has gone completely mad or it deems the future of videogaming to be crude, red and likely to induce headaches.

That was the opinion of most delegates who attended the Shoshinkai festival at the Harumi Center in Chiba, Tokyo. Shoshinkai is an annual event for Nintendo's distributors and was the chosen venue for the Kyoto company's revelation of its '32bit VR system.'

Virtual Boy was shown in two forms. Playable versions of the unit itself were installed on a trio of circular stands, and a giant enclosure was where a dramatic (ie 'is this really it?') presentation of the system's graphics and sound took place, with cardboard goggles distributed to anyone brave enough to enter.

Nintendo's hardware resembles a Viewmaster rather than a VR system, with the player looking into the eyepiece to see the stereoscopic image. Just as the Game Boy screen was yellow, Virtual Boy's is red. And it's not much more impressive, either. The hardware uses a 32bit RISC CPU to generate the twin images, with 'two



The Harumi Center in Chiba, Japan, was the venue for the Shoshinkai show. The promise of Nintendo's new hardware proved a big pull to gamers

high resolution, mirror-scanning LED displays.'

This technology comes from a Massachusetts company called Reflection Technology Inc, which specializes in virtual display hardware and was formed by a team of MIT scientists. Nintendo Of America's press release which was distributed at the show reveals that 'Nintendo has obtained exclusive worldwide licensing rights within the video game market to Reflection's virtual display technology,' and that the present Virtual Boy is only in its 'initial application.'

The graphics are very crude. While the technology used is presumably advanced for the cost, its potential for videogames is all but invisible in the first crop of titles. Nintendo unveiled three prototype games at Shoshinkai, all in playable



The Virtual Boy hardware is red and blue. A joystick with elongated handles is attached via a lead, but the face-hugging display requires a fixed position



Nintendo chairman Hiroshi Yamauchi put on a brave face

But who will buy it? It's awkward to use, it's 100% antisocial, it's too expensive and the 'VR' (i.e. the 3D effect) doesn't actually add to the game at all: it's just a novelty

form. First up was *Mario Bros VB* (no, really) — imagine a static screen and Mario hopping from platform to platform. Another was *Space Pinball*, a standard pinball game with the 3D effect allowing the ball to travel beneath the table. *Telero Boxing* is just plain weird. Needless to say, all three were extremely early versions.

Ironically, Nintendo is expecting great things from the Virtual Boy. The company has stated that it plans to sell three million hardware units and 14 million game cartridges in Japan alone in the period from its launch in April 1995 to March 1996. The system will retail at ¥19,800 (\$207), and three games will be available at launch, costing between ¥5000 (\$52) and ¥6000 (\$62) each.



NCL officials demonstrated the Virtual Boy to show delegates. Few were impressed with the crude monochrome display and lack of genuine portability

Specs

CPU: 32bit NEC V810 @ 10MHz

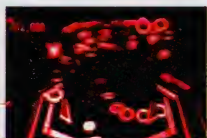
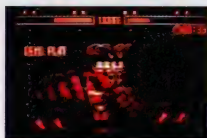
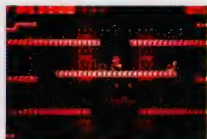
Dimensions: 217x254x110mm

Power: 6 AA batteries

Weight: 760g (body only)

Accessories: AC 100V adapter
Battery charger

Screen Color:
Any color you want (as long as it's red)



Virtual Boy as captured by the NEXTGen-cam. Title screen complete with zooming letters (top left). *Mario Bros VB* — possibly the 'flagship' title (top right). The slick, but ultimately underwhelming *Space Pinball* (bottom left). *Telero Boxing* — hardly a threat to PlayStation *Boxer's Road* (left)



Looking through the goggles of Virtual Boy is like duct-taping two red Game Boys to your face. The 3D effect is nominally impressive, but — so far — adds nothing to the game itself

But who will buy it? It's not portable. It's awkward to use, it's 100% antisocial (unlike multiplayer SNES/Genesis games), it's too expensive and — most importantly — the 'VR' (ie 3D effect) doesn't add to the game at all: it's just a novelty.

Next month **NEXT Generation** quizzes Virtual Boy's designer, Gunpei Yoi (also the creator of the Game Boy) in Japan, and asks: Just what is Nintendo up to?



breaking

Sega and Sony

sell the dream

NEXT Generation witnesses the biggest videogame events since the launch of the SNES



The PlayStation's system ROM includes a CD player and an excellent memory management system — each card has its own 15 data pigeonholes



The PlayStation's styling is pure Sony. The unit is relatively small, measuring just 270x180x60mm, and the joypad is bordering on the minute — trying to hold it with fingers positioned on all four top buttons (top left) isn't easy, but quickly comfortable

A year after Sony first revealed the existence of the PlayStation project, the company has finally delivered its most important consumer electronics product of the decade.

The December 3rd ship-out of 100,000 PlayStations to stores across Japan was highly successful but surprisingly, was not met with the same euphoria-charged reception that the Saturn received on its November 22nd roll-out (see pages 8-9).

However, the lining up phenomenon associated with big Japanese hardware and software launches was in evidence for the Sony machine. On the morning of December 3, **NEXT Generation** checked out Bic Camera in Ikebukuro, a shop which, two years ago, had 12,000 people

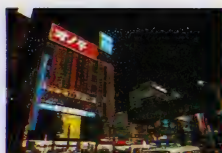
waiting outside for the SNES cart *Dragon Quest V*. Sure enough, by 9 am a small group of cash-padded gamers had assembled to snap up those machines that hadn't already been booked. An orderly queue was managed by shop officials, who gave out numbers to people as they arrived. **NEXT Generation** joined the party and after a short while handed over the required amount of yen.

On that day, gamers were able to buy a PlayStation for just ¥37,000 (\$387), saving ¥2800 (\$29) on the list price — some games and electronics shops were offering discounts of up to 7%. The machine itself comes packaged without a game, and — like the SNES — a single joypad with an infuriatingly short lead. Third party pads from Namco (the Negan, which

Being relegated to the lower reaches with ticket number 306, it was two and a half hours before a Saturn was in the bag



December 3rd in Ikebukuro, Tokyo. Consumers line up for the PlayStation on the off-chance of picking up unbooked machines. Most were successful



Playable PlayStations with Ridge Racer (top right) appeared in Akihabara (above) a week before the launch

Who is it?

Often described as 'the father of the computer,' this 19th-century mathematician and inventor spent most of his life trying to build a calculating machine. He failed, but his place as one of the pioneers of computing is assured

On sale now

At the time of writing, the following PlayStation games were available.

- Ridge Racer (\$5,800/\$60)
- Ultimate Parodius Deluxe (\$5,800/\$60)
- Crime Crackers (\$5,800/\$60)
- A.I.V. (\$7,800/\$81), A.I.V. Evolution (\$10,800/\$113)
- Powerful Family (\$6,950/\$73)
- Mahjong Station Mazin (\$6,000/\$63)
- Tama (\$5,800/\$60)
- Smiley Policewoman Pachinko Hunter (\$6,800/\$71)
- Twinbee Puzzle (\$5,800/\$60)
- Motor Teen GP (\$5,400/\$56)
- King's Field (\$6,300/\$66)

should be available now). Sunsoft and Ascii (March and February, respectively) should rectify the problem. Other accessories available (or due soon) include memory cards, a link-up cable, a mouse, and an RGB SCART cable.

Now that NEXT Generation has had time to get to grips with the finished system, it's no exaggeration to say that Sony's first game console is a tremendous piece of machinery. Even switching on the system is an experience: a sonorous tone booms out as the Sony Computer Entertainment logo fades in on-screen. If a game CD isn't in the tray, the PlayStation's internal system ROM operates a music CD player and a memory file system. This latter feature is, quite simply, the most intelligent game-save facility ever devised. Sony's petite memory cards are sold separately (¥2,000/\$21), each card containing 128K of SRAM. The memory system allows files to be edited and even transferred from one card to another, a unique Sony solution to the problem that every other CD system has been plagued with.

In almost every respect, the PlayStation has surpassed people's expectations. As a performance yardstick, Ridge Racer is outstanding:

the loading system is revolutionary, the graphics are incredible, and the conversion packs plenty of extra features to extend its longevity.

Sony has delivered an astonishing piece of hardware, and a variety of spectacular titles are on the way. Only those US gamers with exceptional will power will be able to hold out until the official launch next September...

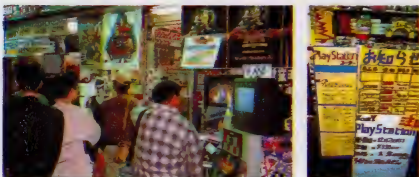
While Sony was still manufacturing PlayStations, Sega's Saturn arrived to a rapturous reception in Japan on November 22. A total of 200,000 units sold out instantly on day one, but according to a Sega source, the company held back 300,000 units so it would have stocks available when the PlayStation arrived.

On the day of the launch, the serious action was in Akihabara, probably the world's most awesome electronics haven, with every shop stuffed to the brim with CD Walkmans, laptop computers, LaserDisc players, and, of course, videogame hardware. Most outlets had been taking bookings for the Saturn in the month prior to the launch, but attempts to book one two weeks earlier had proved impossible.

At 8 am in the morning, gamers were arriving at one of the most hardcore games stores in Akihabara — the Laox Computer Game Center — where a couple of thousand unbooked machines were available and joining the tail of a line consisting of around 300 expectant game freaks. By 9 am that number had doubled. Being relegated to the lower reaches with ticket number 306, NEXT Generation endured two and a half hours before a



A.I.V. Evolution (top), and Ridge Racer (above)



A typical Japanese game shop in Akihabara (left). Shops like these announced the availability of both machines several weeks ago (right)

breaking

it is...

Charles Babbage (1792-1871). After building a simple adding machine in 1822, he started work in 1833 on his ambitious 'Difference Engine.' Although never finished, it is regarded as the forerunner of the modern digital computer.



The Saturn has an all-over matt-gray finish and a rather conventional joypad (top right). Unlike the PlayStation, all the Saturn's settings are saved in SRAM using its internal battery. SRAM carts can be plugged into the cartridge slot

Saturn was in the bag. If it hadn't been for the shop assistant dressed as one of Sega's Coneheads (from the marketing campaign depicting Sega's console being hammered out by inhabitants of Saturn with elongated cone-shaped heads) the wait would have been unbearable. And in the event, the machine cost ¥44,800 (\$469), with *Virtua Fighter* being the only worthwhile game available.

So the hype worked. Saturn was a huge success, and Japanese gamers were beside themselves as they walked away with their prized possession and a near-perfect conversion of the *Virtua Fighter* coin-op.

And the launch frenzy was (almost) worth it: the Saturn is undeniably an excellent machine. For ¥44,800 you get the hardware itself and one joypad (with a longer lead than the PlayStation's), although prebooked machines in other shops were often accompanied by a free extra pad. Like Sony's system, the Saturn is supplied with only composite cabling. Rather suspiciously, a customized AV port means Sega's cables are the only ones that'll work. An extra ¥2000 (\$21) will get you the far superior S-Video hook-up, and an RGB SCART lead is due shortly.

The joypads, which are attached by a 7 foot chord to a snug port on the unit's front, are perhaps the Saturn's

most conventional feature. First impressions are of cheap plasticity and clicky buttons, but the six-button layout will probably win over fighter fans, and this is also Sega's first pad with twin SNES-style top buttons.

Loading times are short. The spectacular boot sequence (in which the Sega Saturn logo coalesces from spinning polygon shards) takes five seconds, and you can expect *Virtua Fighter* to be up and running in another six or seven. This has confounded critics who said that even double-speed CD drives couldn't compete with carts. Sega (and Sony) have proved that with dedicated processors handling the drive (the SH-1 in the Saturn's case), negligible access times are very possible.

Unfortunately, the only reason to buy the Saturn, at this point, is *Virtua Fighter*. It is a stunningly playable game — although its slightly glitchy visuals imply that the Saturn does



Sega's mouse (top), The joypad (middle), and Saturn's *Virtua Fighter* (bottom)



The JVC V-Saturn was available at the same time as the Sega machine, but finding one was difficult. NEXT Generation was given a demo at JVC's offices in Shibuya, Tokyo. All Saturns have an MPEG port (right)



November 22, Akihabara, Tokyo: 600 hundred eager gamers wait in line to hand over ¥44,800 (\$469). Coneheads maintained the peace (left)

have a hard time when asked to shift a load of polygons — but the other software available fails to do justice to the machine. A look at Saturn's release schedule implies that big titles that ideally would have been available at launch — *Panzer Dragoon* and *Daytona USA* — have now been pushed back until the spring. Sega may have arrived in style, but the next few months will be crucial.



i wish...

words 'interactive' information technology, 'edutainment' and 'virtual' were used.

I wish girls played videogames (to stop hogging the machine and give your sister a go).

The great support they have given to our *Earthworm Jim* project.

With all consoles and movies would be released in the same day!

I wish there was an approval committee for console software. If it's drivel, don't let some poor kid blow all his savings on it (games aren't expensive, garbage is!).

Dave Perry is president of California-based Shiny Entertainment, whose first game, *Earthworm Jim*, was released earlier this year.



Dave Perry

developers instead of creating hardware accessories and uniformed restrictions.

I wish there was an FMV virus which would find all pointless FMV sequences in game developers' computers and delete them.

I wish it was easier to get the plastic wrap off new CDs.

I wish developers could create more games that you can enjoy playing.

I wish they had fish and chip shops in the United States.

I wish I got a royalty every time the

Over the wire

A regular spot where NEXT Generation reports on how technology will shape the news of the not-too-distant future...

10:30 am local time, Buenos Aires news Bulletin

TV interviewer Ade Royd has filed a countersuit against cultural minister Dennis Stallmann following last week's sensational announcement that Royd would be held personally accountable for his TV interview of March 24 this year.

Royd is one of two 'combines' (Combination Personalities) used by the CBBS news network in Argentina — both of which are going under trials. Stallmann filed a libel suit after a TV interview in which Royd accused him of him of corruption, fraud negligence and incompetence, backing up his accusations with archived data from sources in — it's estimated — up to 14 countries.

His developers say Royd's neural networking and multitasking let him think and talk at the same time. More precisely, in the time it takes an interviewee to draw breath, Royd can find and recover up to 30MB of data, correlating and cross-checking it against other sources virtually instantaneously.

Stallmann has been fighting for compensation since the interview shown on network TV last year. His main problem until now has been finding someone to sue. Royd's manufacturers claimed they produced a human-like machine, and that its subsequent programming was outside their control.

Royd's tutors, meanwhile, claim they merely taught him how to think, not what to do with the ability. Stallmann finally gained a judgment in HullCenter earlier this year that ruled Royd himself could not be prosecuted.

And unless this decision is overturned before the outcome of Royd's trial, it will have set a legal precedent. Ade Royd will become the first artificial intelligence to be attributed personal accountability.

Royd is unrepentant. In a press conference this morning he announced his counter-suit, claiming Stallmann had used public funds to pay for his legal costs so far, that all his (Royd's) allegations could be substantiated, and that Stallmann had approached employees of the Randev corporation (Royd's manufacturers) and Macrosoft (his programmers), attempting to secure favorable testimony and access to confidential documents in exchange for undisclosed sums.

Royd has also announced his intention to conduct his own defense. In the face of the HullCenter ruling, the judge is powerless to refuse, the trial is due to begin this afternoon. In the last month, three cabinet members have resigned and the government is now facing a major constitutional crisis.

...transmission ends...

Contributions to *Over the Wire* are welcome. Please send your articles (200 words max) to NEXT Generation. Get your page printed and win a year's subscription.

JOYRIDING

by Bernard Yee

gaming updates from cyberspace — this month: Tooling up

Cyberspace has recently grabbed headlines in the courts and in commerce. One on-line service has been sued for defamation by a financial services company, alleging that defamatory remarks were posted by a user on their bulletin board. And Intel was forced to eat serious cybercrow when an on-line uproar exposed the bug to public scrutiny and helped force the CPU monolith to rescind its policy to replace Pentium chips to users demonstrating a need for the 'debugged' CPU.

Being on-line is not only hip, it's a way for people to be heard. Of course, it's also a way to have fun. Whatever the purpose of jacking in — political or personal, sexual or simulation — it's the interaction with real live people that make being on a network, local or national, so compelling.

To 'jack in,' you'll need a modem, of course. Simples convert digital data to analog signals; our residential telephone lines can only handle analog signals. In fact, telephone lines are the biggest obstacle to bandwidth, the term for the amount of information we can pass from one computer to another. You may have heard about ATM (not cash machines) and ISDN, or the more familiar interactive cable; what you need to know is that these next generation 'information' lines can handle a lot more data per second than your outmoded phone line. Modem technology is peaking.

The current crop of modems tops out at 28.8K bps (that's 28,800 bits per second, or about 3,600 characters per second) uncompressed — with the modem's data compression, you can get up to 115.2K bps, theoretically. In reality, given phone lines of varying clarity, your mileage will definitely vary, between 3,100-3,400 cps. A new standard, v.34 (pronounced vee-dot-thirty four) has been passed, so compatibility is 'insured,' relatively speaking. Pass on the older V.Fast or V.FC 28.8K modems unless they are very inexpensive and provide an easy v.34 upgrade path — my V.FC 28.8K Sportster is waiting for a V.34 upgrade chip before it replaces my reliable AT&T 14.4K Paradyne modem. And the price of a V.34 modem has plummeted. Modems are unlikely to get much faster.

But before you rush out and grab that new 28.8K modem off the store shelf, you need to check inside your PC to see what kind of UART you have. A UART (universal asynchronous receiver/transmitter) is a chip that manages data in and out of your serial port. Newer PCs have a 16550 UART, while older PCs have less capable 16450 UARTs; older still are the 8250 UARTs. MS DOS's MSD.EXE should tell you what you have.

According to U.S. Robotics' Johnathan Gaetz, older UARTs will have problems with high speed data

transferrals. A 16450 UART (rated to 38.4K bps) will have no problems with 28.8K throughput if the data is already compressed; a 8250 UART will struggle with anything above 19.2K bps, so a 14.4K modem (still speedy and very inexpensive) will tax this UART to its limit. If you really want 28.8K performance and your UART is socked, you can drop in a 16550, or you can overhaul your I/O with one of the new VL-bus I/O cards by companies like Promise Technology; with 16550 UARTs, enhanced parallel ports (used by some new modems) and Enhanced IDE controllers for speedy hard disk throughput and cheap CD-ROM drives, you'll be armed to the teeth.

If you want to surf the internet, a 28.8K modem and a 16550 UART will be very useful, with its data compression and high speed transfer rates. And when you buy a modem, stick to established companies like Hayes, U.S. Robotics, Practical Peripherals or Supra, to name a few. Their support will be invaluable.

While modems won't become much faster (I'm going to hear it from you when I'm proved wrong on that score), cool new features will be implemented. Telephony, for example, will turn your PC into the most expensive voice mail, telephone, fax and speaker phone in all existence.

But what sounds great — literally — will be the ability to transmit voice, video and data simultaneously over the same phone line. AT&T's Paradyne system requires that both users have the same proprietary AT&T modem, but a new consortium led by Intel and telecommunications leaders Hayes, U.S. Robotics and Rockwell, and the sound standard, Creative Labs, among others, has proposed a new standard called Digital Simultaneous Voice and Data, or Digital SVD. A total of 9,600 bps of the modem signal will be used for voice and/or video, while 19.2K bps will remain dedicated to data. While this technology should make business-oriented multimedia folks happy — video conferencing hardware from Intel and Creative Labs will take advantage of the technology — Doom death matches will never be the same. According to U.S. Robotics marketing guru Tom Potts, DSVS-enabled v.34 modems will hit the market in the first quarter of 1995. They will be a bit more expensive than regular 28.8K modems, but they will come bundled with DSVS enabled communications and entertainment software.

Over the next few columns, I'm going to talk about networks and what's happening in the on-line scene. But cyberspace is a darn big beat. I still want to hear your ideas, so drop me a line on CompuServe at 75300.3625, America On-Line at BernardY (that's BernardY@AOL.COM for you net surfers) and on GEnie at QuestBuster1.

Next Month: where to go when you get there

breaking

Beginning of the end for Video CD?

NEXT Generation wonders if the Video CD format is doomed before it's even off the ground

Although companies like Philips and Goldstar are remaining resolute in their support for Video CD, some distinguished names are notably absent from the digital video roll call. There are indications that giant Japanese electronics firms Sony and Matsushita/Panasonic are beginning to climb down from the MPEG1 bandwagon in favor of high-density CD (HDCD), with its promise of much higher-quality sound and pictures.

For instance, Panasonic's much vaunted FMV adapter for the 3DO has failed to appear and only the most basic of preproduction units has ever been displayed. Similarly, its planned \$1,230 SA-VC10 mini-system — which has already been tested by some hi-fi magazines — has been delayed until the spring and will now not be out with the Video CD player.

Panasonic claimed that the machine was merely an example of what it was capable of, but now it looks as if it might have given up on the standard completely as its engineers work toward HDCD instead.

Elsewhere, evidence of Sony's support of Video CD has been limited to a low key launch of its VCP-C1 carousel player in Japan, which is not destined to appear in the US or Europe. Likewise, JVC has six different Video CD players on sale in Japan but has

announced that none will be launched in the US this year.

Even the UK leader in digital video, Nimbus Records, has canned work on Video CD in favor of HDCD. Nimbus was recently reported as having said: "White Book isn't really good enough for the consumer or manufacturers. We're working on



HDCD and we're not alone. Everybody who's in the business is doing this. There are three or four consortiums working on their own HDCD

solution. There's no point in launching Video CD (since) it will be dead in (18) month's time."

Nimbus is currently working with Hollywood studios in order to develop a standard for the new high-density format. Already it states that a prototype HDCD player could be unveiled next summer, with the possibility of a player going on sale by the holiday season '95.

All this is something of a slap in the face for Philips, which has expended considerable amounts of energy and hard cash promoting the CD-i's movie-playing abilities. But the truth is that MPEG1-standard Video CDs aren't really up to the task. Lacking the availability, cost and recordability of VHS, Video CD needs to offer at least substantially better quality than tape for it to take off as an actual mainstream format.

But because of the current state of CD technology and the limitations of single-speed drives, the

The MPEG1-standard FMV carts for CD-i and CD-24 (left). Are they really the way forward?

HDCD

Normal 5" CDs can store around 74 minutes of VHS-quality sound and pictures at 25fps when compressed to the MPEG1 standard.

The new HDCD format — such as the planned system by Nimbus — will be able to store around 130 minutes of LaserDisc-quality movie footage on one side of one disc.

"There's no point in launching Video CD because it will be dead in a year and a half's time"

breaking



Panasonic revealed a prepro version of its FMV adapter for the FZ-1 3D0 player almost a year ago — and nothing has been seen since

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ng



MPEG1 video suffers from digital artifacts: a close-up from *Patriot Games* shows how fast-moving scenes tend to break up (top and middle). However, static images are realized perfectly (above)

Essential reading

Video Games: A Guide for Savvy Parents

David Sheff

Publisher: Random House 1994

Release Date: Available now

136 pages



For those of us who missed the Baby Boom Generation (and thus, the 60s) but linger at the top of the so-called Generation X, and who have already experienced and continue to revel (with glee) in the evolution of the gaming industry, videogames are not a new phenomenon. Nor are the rushes of excitement, anxiety, fear, and joy these games produce in us; you see, most of us have adapted to video machines in our lives and homes — and continue to plug on.

For those Baby Boomers with children (and to whom the book is aimed) who feel the videogame industry is winning their children over with bloody, unethical fighting games, and who feel utterly helpless against the minds at Sega and Nintendo, here is a self-help book for you.

Video Games: A Guide for Savvy Parents is a book reeking of common sense morality and friendly, pragmatic techniques which will, hopefully, enable parents to understand and control that costly beast in their home known as the 'game machine.'

In general, the thorough overview of ethics presently surrounding the industry is generally well thought out and will give anxious parents a sense of relief; while these hearings are now old news, the December 1993 Congressional hearings were, and are, worth knowing about. Further chapters concerning videogame culture, including sex, violence, and concepts like 'finishing him off' are mostly helpful for the ignorant or distressed, and overall, these discussions convey a strong pedantic tone. But if you're a game player with common sense (i.e. most gamers), skip most of the book. The best tips appear in chapter 5, "Living with Video Games," and contain Sheff's techniques portraying the positive incorporation of videogames into the family, creative alternatives, and encouragement for parents to actually play the games — truly the best advice in the book.

I can see Sheff eventually becoming a very popular figure. As I envision him touring around the country in big auditoriums and schools preaching which games to play, what not to play, and what's good for your children, etc., precomputer age parents will swarm to his lectures and cram facts and perspectives into their brains concerning the ethics of *Mortal Kombat III*, *Road Rash*, *Night Trap* and others. His success will not be due to terribly insightful perspectives on child time-management or his miserably simplistic rating scheme at the end of the book (a smiley face is 'good fun,' two bombs equal 'Extreme violence,' and a thumbs down signifying 'forget it.' It will be because of Sheff's semi-scientific research (on his own child, Nicolas, among others), his studies on Nintendo, 'Nintendoitis' and other things Nintendo, and his cool, erudite and parental tones which are the stuff publishers love to market and ex-hippie parents buy in droves.

Movers & Shakers

A monthly look at **business news** affecting the **gaming world** by **Selby Bateman**



Selby Bateman,
the executive editor
of *Computer
Entertainment News*,
the US's leading trade
newspaper for the
computer leisure
industry

ON THE WING...

NEWSLINE: "Wild Bill" Stealey is back in the skies. The high-energy, high-profile cofounder (with ace game designer Sid Meier) of MicroProse played a big role in creating and defining the aerial-combat computer-game genre through the '80s and early '90s before he and MicroProse parted ways. Now, he's an investor in Raleigh/Durham, NC-based Interactive Magic, which is publishing *Apache-Gunship*, a next-generation attack helicopter game for the PC.

BOTTOMLINE: "Wild Bill" showed himself to be one of the shrewdest marketers of consumer entertainment titles, especially flight sims and aerial combat. *Apache-Gunship* has been developed by the UK's Digital Integration, a superb game-design house (e.g., *Tornado*), and is based on the company's new 3D software engine. Expect to hear more from Interactive Magic and, of course, from "Wild Bill."

OFF A CLIFF...

NEWSLINE: Now that the holiday selling season has died down, you can find some amazingly good prices for videogame titles and some PC games. Many of the games that didn't sell during the holidays are now being heavily discounted at a wide variety of retail outlets — with some titles as low as \$9.95.

BOTTOMLINE: It's a good news/bad news story. For the gaming cognoscenti, there are some real bargains to be scooped up right now. From a business standpoint, however, severe price cuts and deep discounting are not signs of a healthy and growing business. Expect to see some weaker, under-financed game publishers go under or be purchased by other companies. It's brutal out there!

WILL IT SELL A GAZILLION?

NEWSLINE: When Naomi Kokubo and Steve Hoffman sat down a year ago at their kitchen table to design a computer game from scratch, they had little more than an idea and a lot of ambition. Today, San Francisco-based LavaMind is their company, and their creation is *Gazillionaire*, a wacky Monopoly-style game set in the Galaxy of Goggs.

BOTTOMLINE: A compelling idea, a year of hard work, a modem, and access to the internet resulted in this rags-to-riches story. Kokubo and Hoffman put a shareware version of *Gazillionaire* on the net, and the response was so great they had to beat software publishers away with a stick. Spectrum HoloByte ended up distributing the title. Shades of Id Software's *Doom* shareware strategy! It works!

DON'T COPY THAT...CD?

NEWSLINE: The Software Publishers Association (SPA) has launched a new version of its antipiracy public-relations effort to curtail illegal copying of software. But waiting in the wings is a related, potentially huge, problem in the same area. Expect CD-R (CD-Recordable) players to fall in price below \$1,000 this year and to be widely available to consumers before year's end.

BOTTOMLINE: "Don't Copy That Floppy" has been the SPA watchword against piracy. And until now, CD-ROMs offered protection from widespread piracy — you just couldn't afford to press your own. That will fundamentally change within the next 18-24 months as recordable CD-ROM drives become much cheaper and easier to use. In the meantime, software publishers are putting their heads together to come up with solutions to this potential nightmare.

THE COMPETITIVE LANDSCAPE

NEWSLINE: Market analysts Robertson Stephens & Company of San Francisco closely follow trends and prospects in a variety of industries, including the interactive-entertainment biz. A quick look at the accompanying table of information from RS & Co. should be enough to indicate the kind of pitched battle facing game-platform manufacturers during the next two years.

BOTTOMLINE:

Multimedia PCs have, arguably, become the high-end interactive entertainment winners, with an installed base that calls to software publishers much as the Sirens called to Ulysses (with not the same infrequent, rocky results). Meanwhile, RS & Co., perhaps hedging its bets somewhat, sees no clear winner among a bewildering array of new game systems.

Entertainment hardware: Selected competitive landscape				
Installed Base (Estimated)				
		1994	1995	1996
Multimedia PCs (in homes)	US	6,200	13,000	20,700
	WW	11,000	20,000	23,600
Sega CD	US	1,300	1,600	1,700
Atari's Jaguar	US	270	600	900
	WW	125	700	1,800
Sega's 32X	US	0	200	1,800
	WW	0	500	5,000
Sony's PlayStation	US	290	1,000	15,000
	WW	0	300	1,400
Sega's Saturn	US	0	300	1,300
	WW	0	700	2,600
Nintendo's Ultra 64	US	0	200	1,300
	WW	0	900	3,100

breaking

Sega still on top in Japan arcades

Virtua Fighter 2 shows that Sega is staying ahead of the game

The only thing that can match the Japanese obsession with new consoles is their enthusiasm for the latest coin-ops. This Christmas, as many major manufacturers unveil exciting new units, Japanese arcade fans have been salivating even more than usual.

The launch of *Virtua Fighter* in December last year confirmed Sega's near-invincible position in the arcade arena. To appease aficionados of the game who have been clamoring for more, the company has just released its sequel. And in the same way that *Daytona USA* shot past *Virtua Racing* in terms of power and playability, the Model 2-based VF2 manages to make the original look dull and uninspiring.

On the day of release, crowds of *Virtua Fighter*-obsessed punters turned up at major Japanese game centers to witness the machine being installed — posters announcing the event had been displayed in coin-op parlors for weeks previously and proved to be extremely effective in raising anticipation.

NEXT Generation attended one of the biggest game centers in Akihabara, Tokyo. It quickly filled as the appointed moment arrived, and within minutes of the power being



The latest game to use Sega's Model 2 board is the wonderfully texture-mapped polygon racer, *Sega Rally* (above)

connected, more than 100 people were jostling to glimpse the screen. The consensus was that the wait had been worth it, as the stunning looking and wonderfully controllable characters began to sweep each other (and the audience) off each others' feet.



It's only when you see it moving that you can appreciate how amazing *Virtua Fighter 2* really is



UK arcades face taxing time

Buried in the small print of the recent UK tax review was the announcement that the Gaming Machine License Duty, payable on all coin-ops, is to be increased. On 10p (15c) and 20p (30c) machines the duty will rise from £450 (\$675) to £535 (\$802.50).

Chancellor Kenneth Clarke justified the rise with the argument that the tax hadn't been increased since 1987. But arcade operators condemned it as a severe blow for an industry struggling to combat recession.

The result of the rise is that many machines may now become uneconomic and disappear from arcades altogether.

Across town, at the Ikebukuro Sunshine City Convention Center, *Sega Rally* was wheeled out as the star attraction of Sega's arcade-dedicated booth at the Nicograph show.

Developed by AM3 (previously responsible for *Jurassic Park* and *Star Wars Arcade*), *Sega Rally* is driven by an enhanced Model 2 board, and the results are extremely impressive. Three tracks will be available when the game is released early next year, allowing you to scream across deserts, through forests and over mountains.

The differences between *Sega Rally* and its theoretical predecessor, *Daytona USA*, soon began to emerge. AM3 has dispensed with the multiple views and instead included a single, in-car, perspective. The addition of a rearview mirror and a speedometer makes it obvious that the game owes a significant debt to *Ridge Racer*. It seems ironic that Sega is now looking to Namco for inspiration, rather than the other way around.

ng

Arcadia

The **coin-op business** is an excellent barometer of what's coming to the home. And here it is...



Marcus Webb is the editor-in-chief of *RePlay* magazine, the US's leading trade amusement magazine

by Marcus Webb

Block Party

Video movie rental king Blockbuster opened a prototype operation called Block Party in Albuquerque, NM, on Dec. 19. Basically it's a 30,000 sq. ft. indoor mall, dedicated to entertainment for grownups. And yow, is it fun!

The company wants to attract Generation Xer's, Baby Boomers, yuppies, dating couples, young marrieds and up (must be 18 to enter). Block Party will try to pull those demographics via classy design and decor, upscale pricing, and grown-ups beverages (beer and wine are on the menu at Souper Bloopers, their 'fun food' restaurant). Block Party features special attractions including a few 'immersive' (headset-type) virtual reality systems from the British firm, Virtuality Group. There's also an 18-person ride/theater with hi-tech, movie seats and the four-minute, special effects-heavy films come from the Lwerks company in Los Angeles.

Block Party's arcade is called "Flippers." Walking inside, you almost feel like a pinball zinging through a giant playfield. The area is decorated with towering mushroom bumpers, six-foot long flippers on the floor, giant 'tilt' signs and more. Flippers offers 160 amusement games. Video predominates, with all the hits available...from six of Sega's linked sitdown *Daytona USA* cabinets, to eight of Namco's *Suzuka 2* motorcycle simulators, to Midway's *Killer Instinct* and *Cruisin' USA*. Arcade classics like *Centipede* and *Ms. Pac-Man* are also on hand to draw more female players into the arcade. Around a dozen pinballs, some



Blockbuster's Block Party (top). Six-player *Daytona Racing* draws in the crowds (middle). *Tekken* (below)



hockey tables, and football and golf novelties round out the arcade mix. Games cost from 50¢ to 60¢ each; special attractions run as high as \$3.25 each. You buy a debit card at the door and pay for all entertainment with your card.

A second, slightly smaller Block Party opened in Indianapolis in January. If the concept succeeds, Blockbuster plans three more center around the USA this year (mostly in mid-sized cities) and they may roll out many more such fun centers nationwide, and quickly, over the next couple of years. Block Party was conceived and executed by some very savvy entertainment pros who used to work for Disneyland and Chuck E. Cheese.

Tekken is Here!

Last fall, Namco America sneak-previewed a beautiful fighting-themed upright video, tentatively titled *Rave Wars*. At the time, Namco promised to deliver texture-mapped 3D polygon graphics. Now the game is out, renamed *Tekken*, and it contains Namco's new system 11 board, which it shares with Sony's forthcoming PlayStation home system. A new algorithm function enables players to press individual buttons to punch and kick with each arm and leg separately, so gameplay is far more lifelike. But, said Namco, additional boards inside the dedicated game will give the arcade version more depth than players will get later this year when it's released for Sony's home system.

Look For These New Arcade Videos

Sega's *Virtua Fighter 2* began arriving in US arcades in Mid-January. Like its predecessor, it features 3D polygon graphics with ultra-realistic special relationships and movement. What's new and different? This system has the 'texture-mapping' technology (from defense contractor Martin Marietta) which puts photo-realistic surfaces on those lifelike polygon objects (i.e. the same technology which made Sega's *Daytona USA* so stunning. Capcom's *X-Men* also arrived in January, following the arcade industry's first ever, on-line 'electronic debut' on the CompuServe network in December. Data East's *Locked and Loaded* began appearing in mid-December, insiders hint their *Tattoo Assassins* may arrive in February; that's the game which *Back to the Future* producer Bob Gale wrote, produced and directed...from his own original movie script.

Virtuality: Coming Soon To An Arcade Near you

British-based Virtuality Group now has 300-plus units around the USA, with about 700 systems in 33 nations worldwide. Their American subsidiary, Virtuality Entertainment, is based in Irving, Texas where they began manufacturing their new Series 2000 VR hardware last fall. Current capacity is 12 pairs of systems per month, and increased manufacturing capacity is planned. So, if there's not a Virtuality machine near you yet, there probably will be soon.

breaking

Datebook

March

Folio—Midwest March 13-16, 1995 Chicago, IL. Located at the Sheraton Chicago Hotel and Towers. For magazine and book publishing professionals. This show — Folio:Show's 20th anniversary — is composed of publishers showcasing educational programs, pre-press technologies, and new media, and covers all aspects of magazines and book publishing. Produced by Cowles Event Media. For more information call: 1 (800) 927-5007.

Software Publishers' Association Spring Symposium, 1995, San Diego, CA March 11-15. This symposium is for top executives from software pubs and others associated with publishing. There will be seminars, heavy networking, more than 1,500 in attendance. Not open to the public. Primarily CD-ROM based entertainment, consumer and business applications, some cartridge products will be available. Mostly panels, CODY's gala at the end.

New Media '95 March 14-16, 1995 Los Angeles, CA, LA Convention Center. Chiefly for corporate managers, technology enablers, information transporters, content providers, and those interested in business and revenue opportunities based on new technologies. 15,000 total people attend. 140 companies will exhibit. Reflects the major aspects of the digital revolution. Booths will appear on a show floor, and the conference is educationally based. There will be 40 conference sessions on various topics. For more information call The Interface Group at (617) 449-6600 and ask for attendee registration.

Computer Games Developers' Conference in conjunction with the Santa Clara Convention Center Saturday night through Tuesday night April 22-26 Westin Hotel, Santa Clara. Organized by computer developers for computer developers. This annual conference is composed of seminars that range for in-house and independent developers on topics such as art, animation, sound, playability, interface, legal issues for independent developers, etc.; meals included; booths are very limited. This is not a marketing conference. Awards for various games, and an awards banquet. Open to the public. Between \$275-\$650. Call (415) 948-2432 (CGDC).

May

Selling and Marketing Mega Show May 2-4, 1995 New York, NY. Showcases the latest ideas, leading edge tools, and educational seminars in the sales, marketing, and customer service businesses. More than 1,400 exhibits. Consists of three major shows: sales, marketing, and incentive education programs. Seminars include sales, marketing, people performance management, incentive planning and more. Programs presented by Assoc. of Sales Professionals, the Promotion Marketing Association of America, Trade Show Bureau, Meeting Planners International, etc. Call Miller Freeman, Inc. (800) 950-1314.

E3 (Electronic Entertainment Expo) May 11-13, 1995 LA, CA. Showcases entertainment software, retail products, video, book catalog, record and other mediums. Designed for entertainment software title publishers, developers, content providers, and property rights marketers. Call Knowledge Industry Pub. at (914) 328-9157.

SHOW ORGANIZERS: If your show isn't listed here, it's because you haven't told **NEXT Generation** about it. Do so by calling (415) 696-1888, or FAX information to (415) 696-1679, or send details to **DATASOFT, NEXT Generation**, 1350 Old Bayshore Highway, Suite 210, Burlingame, CA 94010.

Generator

by Mark James Ramshaw



A behind the scenes look at what game developers think of Apple's plan to enter the game arena

Welcome again to Generator, the place where real industry opinions are voiced, with the focus this month on Apple's plans to enter the multimedia console market. Since Apple went official in late '94, the industry has been readying itself for yet another console/multimedia launch.

Pippin is the name of the platform, and with a Power PC chip at its core, a quad-speed drive, and reduced Macintosh operating system, it's certainly no token effort on Apple's part. Apple has licensed the technology to other manufacturers, the first being game giant Bandai, who's planning to launch the Pippin system under the much more sensible name "Power Player" late this year, with an expected retail price of \$500.

The specs — a 66MHz PC603 processor, 6 MBs of memory, 16bit video with VGA support (up to 16.7 million colors), composite S video, dual stereo 16bit CD quality audio output, 16bit digitized input, and network support — make it sound like a multimedia dream come true. Indeed, Apple claims: "The Pippin platform will provide customers and software developers with significant advantages over current CD-ROM based multimedia players, many of which are focused on playing game software."

So Apple is pitching the machine as a multimedia system which can also play games. But remember that the Pippin doesn't come with either a keyboard or a mouse. And can 6 MB of RAM (which must also handle video display duties) really be suitable for anything other than playing games?

Alex Summersby, Editor of MacFormat magazine agrees. "My impression is that to all intents and purposes it's a Power Mac. It's got everything you'd get with a Power Mac — Power PC processor, fast CD-ROM drive. But for a multimedia system you need a keyboard, a mouse and at least 16 MB of RAM to run decent multimedia software."

So will it be able to compete with Sony, Sega and Nintendo as a games console? "In its attempt to be a jack-of-all-trades, it may end up master of none," reasons Summersby. "I'm keen to see Apple succeed. They've been innovators for so long. But I'm not sure if they're on thin ice here."

Phil Harrison, Director of Product Development over at Sony Electronic Publishing, certainly doesn't seem too worried. "I'm not really able to give a fully informed opinion yet, but the fact that it doesn't seem to have dedicated 3D graphics hardware suggests that it can't really compete against the PlayStation. But it could well find a niche as a multimedia system."

But what about software support? There'll be 50 converted Mac CD titles available on launch, but despite Power Player's multimedia capabilities, its success will depend on backing from independent software developers. At the moment, the only official developers are small software houses with previous Mac market experience. The game giants are conspicuous by their absence.

Neil Jackson at Argonaut Software: "I'm concerned that the sexy world of console games is a new ball game for Apple, and they may be unable to shake off that 'publishing tools' image."

What about the fact that they're pitching it as a multimedia system? Jackson added: "Anything that's aimed at multimedia, unless it's just a passive toy, has got to have a keyboard. How could an anyone use it as workstation? I imagine it'll make a good console, though it won't stand up to the Ultra 64 (the Saturn and PSX, maybe). It's good to see that hardware companies have faith in market. But as ever, there will be some winners and some losers, and I fear for the Pippin."

Mark Ramshaw is a free-lance journalist and game designer, currently residing in the places other game magazines don't even know exist

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The wait is over.
The PlayStation has been
launched in Japan and Sony
has joined the elite club of
console manufacturers.
But what does Sony know
about videogames? How
can it possibly compete
with the likes of Nintendo?
NEXT Generation weighs
its chances of success



Playstation

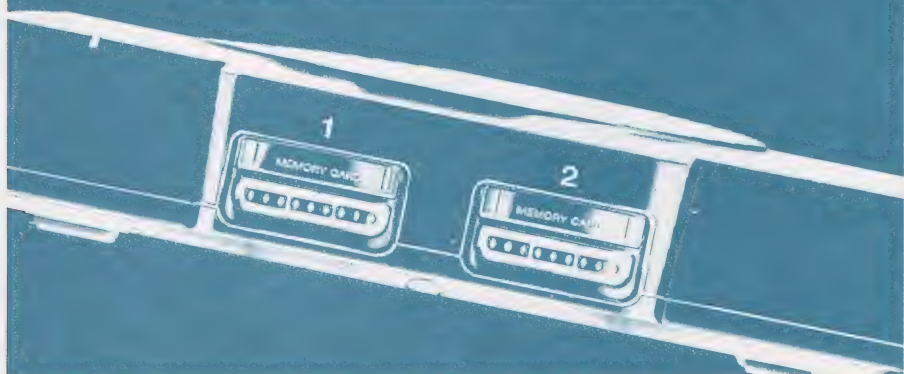
Sony's bid for power

It's early December in Tokyo. The holiday buying season has started in earnest and The Land Of The Rising Sun is in the grip of its annual frenzy of consumerism. Swarms of fashion-conscious, young Japanese pour in and out of expensive department stores, subway trains groan under the weight of weary shoppers, and the world's electronic goods Mecca, Akihabara, pulsates under a skyline of shimmering neon. In the midst of this buying mania, Sony rolls out its single



"We do recognize Sony as a major player. It's just that we're confident that we know videogames better than anyone, and we feel supremely confident that at every technical turn the Ultra 64 is a superior machine to the PlayStation and will offer a greater gaming experience"

Peter Main, Nintendo



most important consumer product of the 1990s: the PlayStation.

The world's most powerful videogame system hit the shops on a mild December 3, 1994. The Japanese had been exposed to the machine in the weeks prior to the launch by a series of TV ads depicting brainwashed college students banging on desks and chanting the name of their long-awaited dream machine: "PlayStation..." Stores showed videos of forthcoming games. In the final stretch, playable machines appeared outside storefronts running Sony's jewel-crowned *Ridge Racer* (see page 42).

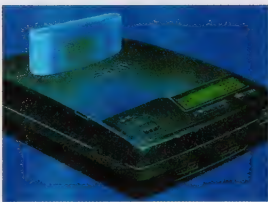
And yet, unlike Sega's big day two weeks earlier, the PlayStation met with only moderate hysteria in the Japanese high street. Lines were far less impressive than the ones that had gathered to meet the Saturn, and there were few sell-outs for shops to brag about. For a company with no significant experience in the game industry, the launch of the PlayStation was undoubtedly a spectacular success, but the fact that Sony had a stronger software line-up, a better machine and an all-important price advantage was not reflected in the sales figures.

The PlayStation, of course, lacked one thing: *Virtua Fighter*. In the eyes of Japanese gamers, Sega's groundbreaking fighter more than justified the price of the Saturn by itself. Ultimately, Sega's coin-op kudos proved to be more than a match for Sony.

The arrival of the PlayStation in Japan is the culmination of a long-standing campaign by Sony to gain a stake in the ever-burgeoning videogame market. Until now it has failed to make any significant headway. Ever since its investment in the abortive MSX home computer standard—supported by manufacturers like Toshiba, Matsushita and Sharp—Sony's forays into the sector have not been great successes, and it has remained merely a bit player on the global videogame stage. Some observers suggested that the company was too big to be happy with just a piece of the market, and too inexperienced to know how to approach it.

As Nintendo's Peter Main puts it: "They haven't actually done that much in the game market so they can't be judged just yet. What you can do is ask how they've done in music and movies, and the answer is not that well."

One of the reasons for Sony's reluctance to launch an all-out assault on the videogame market was Nintendo. Sony



© Acrid Corp



The PlayStation/SNES CD-ROM hybrid (artist's impression, top); Sony's SNES soundchips (middle); and NCL's Kyoto base

became increasingly intimidated by the Kyoto giant during the most successful years of the NES (1985-88), and the company was further subdued by the arrival of the Game Boy in 1989, which saw Nintendo encroaching on Sony territory. Sony was so impressed with the design and performance of the low-cost handheld Game Boy that its main R&D team working on consumer portables was apparently chastised by its manager on the basis that "the Game Boy should have been a Sony product." According to David's Sheff's definitive history of Nintendo, *Game Over*, one engineer was so ashamed that he actually left the company.

In 1988, though, Sony saw fit to embark on a mutually beneficial agreement with Nintendo. The deal was to develop a CD-ROM drive for the 16bit SNES—a console that wasn't due on the market for

another 18 months. This was a chance for Sony to get a grip on the market it had been eyeing for years. Nintendo wanted CD-ROM. Sony wanted market share. Thus, two of the most successful and feared companies in the Japanese electronics industry joined forces.

The technology that was to bring them together was Sony's (and Philips') CD-ROM/XA, an extension of the CD-ROM format that interleaves compressed audio, visual and computer data (and allows both to be accessed simultaneously with the aid of extra hardware). However, Sony also had plans to develop another Nintendo-compatible machine, a self-contained entertainment system that would play both SNES cartridges and a new CD format designed and solely licensed by Sony. Called Super Disc, this proprietary format would also form the basis of Nintendo's own CD-ROM drive. Thus, the PlayStation was born.

Sony had seen a potential to create a new kind of videogame on CD-ROM by using its vast entertainment interests, which included Sony Music and Columbia Pictures. In fact, it was so confident of its new format that it planned to be the sole worldwide licensor of the Super Disc.

Of course, such actions didn't endear Sony to Nintendo. As the PlayStation started to take shape, Nintendo found that it was becoming an accessory to the global ambitions of its partner. The rival electronics giant had Nintendo's market share firmly in its sights and was only a few steps away from starting to entice its licensees and customers away.

Nintendo's relationship with Sony had always been fraught with difficulties, though. NCL experienced problems when it enlisted the support of Sony's digital and audio R&D division to design a soundchip for the SNES. After its completion (it was designed by Sony's hardware supremo Ken Kutaragi, the chief engineer who went on to create the chipset for the new PlayStation), Sony retained all rights for the programming of the chip, and then charged Nintendo excessive fees for access to information for its developers.

Although irritating, development hiccups were one thing Nintendo could handle. But faced with a problem that threatened its core business, it knew it needed to take drastic action. One month before the Chicago CES in 1991, Hiroshi Yamauchi, the chairman of Nintendo, instructed his son-in-law Minoru Arakawa and Howard Lincoln to travel to Philips'



"The PlayStation is definitely the sort of machine the market has been waiting for. It provides a huge technical leap forward even more apparent to the end-user than the jump between 8bit and 16bit. It's revolutionary rather than evolutionary"

Gary Bracey, Totalstar



HQ in Eindhoven, Holland, to secure a deal that would allow Philips to develop a CD-ROM platform for the SNES. The deal also permitted the codvelopment of a bridge format to enable compatibility between Philips' own CD-i platform and Nintendo's proposed CD-ROM games.

Meanwhile, Sony chose the first day of the 1991 Chicago CES to publicly announce the development of the PlayStation and cement its relationship with Nintendo. The news of the system was an immediate press sensation and was well received by an industry keen to usher in a new dawn of CD-ROM technology without writing off new cartridge systems like the SNES. But it was a futile exercise. On the second morning of the show, things went horribly wrong for Sony.

At 9 am, a press conference was held by Nintendo, attended by the industry figures and the world's specialist press. It was expected that Nintendo would divulge details of its alliance with Sony and its plans for the PlayStation. Instead, Howard Lincoln sharply announced to the assembled industry watchers that Nintendo had chosen to work with Philips.

Sony was enraged. The news wasn't entirely unexpected, though. Information about the deal had started to circulate within the company 48 hours previously, and the aging chief executive, Norio Ohga, had acted immediately to stop it by telephoning Hiroshi Yamauchi directly at NCL. In Sheff's book, Lincoln reveals: "There were tremendous efforts on a worldwide basis to stop that conference from happening. They (Sony) gave up on us but they kept pressuring Philips."

For Sony to be snubbed in this way was a great shock to everyone concerned, not least to senior management in Sony's emerging games division.

"They stabbed us in the back," said SEP boss Olaf Olafsson in *Game Over*. After a difficult period of legal wrangling and much name-calling by Sony, Nintendo managed to extricate itself from the contract that it had signed with Sony without suffering even a penalty. And yet, that wasn't the end of the matter.

Throughout 1991 and 1992, development of the PlayStation progressed on the general understanding that an agreement would be reached over the licensing of Nintendo CD software. At the end of 1992, Nintendo, Philips and Sony signed a deal whereby Sony's PlayStation would be able to run SNES CD-ROMs but left Nintendo with the sole rights to all its



The realtime dinosaur demo (top) became a benchmark of PlayStation performance. SCE's Tokyo HQ is located in Minato-Ku

games, including CDs.

The PlayStation never made it out of Sony's factories. The hardware reached the prototype stage, and the software even started to be produced — one "absolutely awesome" game was apparently close to completion — but after a tortuous round of negotiation and litigation with Nintendo the project was scrapped. To this day, around 200 original PlayStation units lie in Sony offices worldwide collecting dust.

But no one really expected Sony to give up after it had come so far. And indeed, it simply went back to the drawing board and continued the project alone.

When the PS-X, or PlayStation-X, surfaced in late 1993, the biggest surprise was that the machine would not embrace the multimedia aspirations of The 3DO Company and Philips. Sony had visited

3DO when Trip Hawkins was selling his 3DO technology to hardware manufacturers, and its engineers came away from the San Mateo offices distinctly unimpressed, maintaining that the technology was 'nothing new.' Instead, Sony took a confident stride toward creating its own thoroughbred game playing machine.

Perhaps the most crucial episode in the whole PlayStation saga is the establishment of a global network of supporters. Sony learned from the mistakes made by 3DO and Atari and realized early on that it would not have a place in the market without good software support. Since late last year the company has set about recruiting prominent developers throughout the world. Few have refused. Naturally, those with a strong allegiance to Nintendo offered a polite, "Thanks but no thanks," but some did make the switch from developing for rival hardware. *Mortal Kombat III* was one game that Nintendo thought it had in the bag for the Ultra 64, until Sony's PlayStation hardware arrived at Williams. Now, the game is due to surface in the arcades using Sony's technology, and a portover will appear in a few months on home systems.

With virtually no past record in the game hardware field, Sony has done a remarkable job in persuading developers to climb aboard. Since the machine's announcement, more than 250 companies worldwide have signed up and some 700 development stations have shipped out.

Even Nintendo acknowledges the scale of Sony's success. "We're well aware of the hype surrounding the PlayStation," said Peter Main, "and I think that Sony is doing a great PR job at the moment. Thankfully, it seems to be at the expense of the 32X and Saturn, which people now seem to be skeptical about."

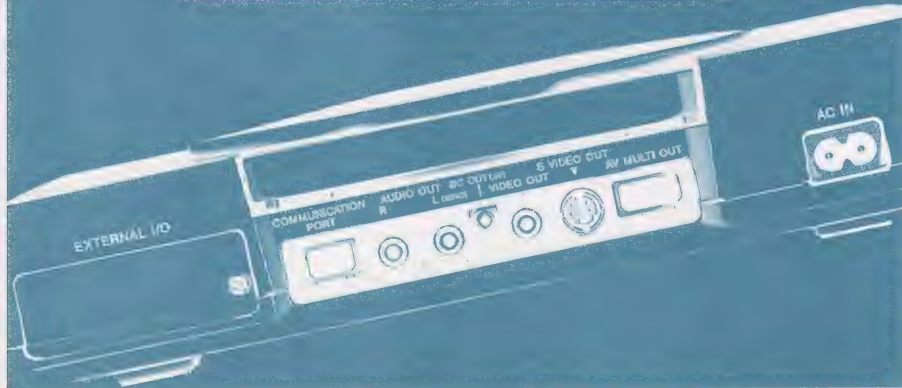
Demonstrations of Sony's technology to developers have done more to convince the industry of the machine's benefits than any number of marketing executives could have. Konami UK's Pete Stone recalls his first experience of the hardware: "Sony showed us a demo back in January. It was running at only half-speed, but even then we came out of that meeting with our jaws on the floor. We've since been hugely impressed with the sheer processing capabilities of the machine and the routines that are built into the hardware."

The involvement of coin-op companies like Konami and Namco right from the start has been one of the most important factors in the evolution of Sony's



"The PlayStation is very strong, certainly in comparison with the Saturn, but Sony has absolutely no experience in this market and the game market really is like no other. You can't just come in and buy market share. You have to build it"

Darryl Stitt, Atari



hardware and software. As well as encouraging the translation of big coin-op hits like Namco's *Ridge Racer* and Konami's *Ultimate Parodius*, Sony knew it would be a smart move to use the PlayStation as a breeding ground for arcade products — the rich arcade heritage of both companies was something from which it would immensely benefit. "We're one of Sony's closest partners," claims Pete Stone. "We've got 12 titles in development for the PlayStation, and we're also developing coin-op games using the Sony chipset."

Although the quality of Sony's technology has never been in doubt, the company does have one major problem in that it lacks an established internal game division for churning out quality titles.

Sony Computer Entertainment's in-house muscle is actually a collection of external developers that have worked on a range of titles for release during the first six months, including the launch racer *Motor Toon GP* (from third party team Bandit) and the shoot 'em up *Philosoma*. Without its own 'Sonic Team,' or a game design guru like Miyamoto, many feel that Sony will be relying too heavily on third party product of varying quality. And this view was largely confirmed by the launch line-up. Leading the pack is Namco's excellent *Ridge Racer*, while a glut of mah-jongg and pachinko games bring up the rear.

Something else that doesn't inspire confidence is Sony's own track record in game publishing. Since its establishment in 1991, Sony Electronic Publishing (SEP) has seen its reputation plummet with the release of substandard cartridge games like *Last Action Hero* and *Cliffhanger*.

Many people also rightfully questioned Sony's acquisition of Psygnosis in 1993 for the tidy sum of \$48 million. The question on most people's lips was: Why was a company with so few quality games to its name placed in such high esteem by Sony? Some maintain that it was the company's technical expertise in which Sony was interested, while others claim that it just didn't understand the market.

"Sony couldn't see the wood for the trees," one developer told **NEXT Generation**. "Highly paid Sony execs were seduced by this company that could make videogames that looked like computer movies. That fact that the games also played like movies didn't seem to ring any alarm bells." But of course, the most painful irony of all is that Psygnosis' most successful game and the company's flagship,



Sony chie: the blue debugging station (above).
Namco has played a vital role in the PlayStation's evolution (Tokyo HQ, top)

Lemmings, was designed by Scottish third party developers DMA.

SCE's slogan, "If it's not realtime, it's not a game," sits uncomfortably with the image Psygnosis has acquired. Psygnosis claims that it now has a machine that can handle highly sophisticated graphics in realtime, and that the PlayStation marks a turning point in its game design.

Making this more credible is the streamlined development process that Sony seems keen for its developers to adopt. Custom 3D libraries like those in RenderMorphics' Reality Lab — rumored to be a part of the Sony machinery soon — will make ultrafast 3D a breeze. This minimizes the need for extensive low-level programming and allow the game designer more freedom to practice his or her art. Extensive libraries provided in PlayStation hardware have been also well received in

the development community, enabling quicker and easier development.

Sony's decision to go with CD-ROM technology has had mixed reactions. From the titles **NEXT Generation** has seen, the PlayStation CD-ROM technology has been designed to deliver games with the minimum of fuss, and wait times are negligible. But prejudice against CDs is still strong in the industry.

"With CD, even a double-speed drive isn't fast enough to deliver what game players are used to," admits Vivid Images' Mev Dinc. "Having said that, we just have to accept those limitations and use our skills to write great games for the PlayStation. I'm sure we will, because, CD-ROM aside, it's a brilliant machine"

Konami's Pete Stone agrees: "Software will have to be written and configured thoughtfully to get around that problem and what we may see is a slightly different style of game emerge, one that isn't particularly reliant on speed."

Sony's decision to go with CD-ROM technology is undeniably the right one, though, for one specific reason. The most significant effect that Sony has had on the market — even before the arrival of the PlayStation — is its persuasion of third party developers to charge up to 40% less for their PlayStation games than they would for cartridge software. At launch, most of the software for the PlayStation costs under ¥6000 (\$61). In contrast, most new SNES games still retail for almost ¥10,000 (\$102).

Now that the PlayStation is out in Japan, Sony has turned its attention toward the west, saying the unit will be released in the US and Europe in September 1995. Few (except Sega, Nintendo, 3DO and Atari, of course) will be sorry to see it arrive.

"It's certainly good to see a company the size of Sony entering the market," says Fergus McGovern, head of Probe Software. "Their past hardware successes do suggest that they know what they're doing — although when they've entered new markets they've had problems, such as writing off billions of dollars in Hollywood."

But Sony can write off billions of dollars. And if an organization as large and powerful as Sony is determined to do something, it usually succeeds.

The game industry may never be the same again.

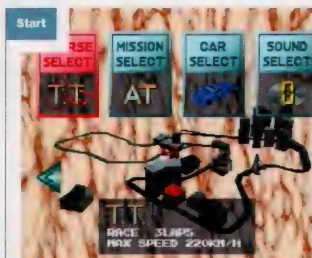


Ridge Racer, a showcase of PlayStation's power, is reviewed on the following pages

ng hardware

Ridge Racer

Of course, PlayStation is only as good as the games that can be played on it. NEXT Generation puts the most anticipated game of the decade to the test...



The range of prerace options added by Namco gives the home version greater longevity (top left). In the city, a truck crosses the bridge, as in the coin-op (top right). A video wall displays a demo of *Galaxians* — a token inclusion from the *Ridge Racer 2* coin-op





Ridge Racer looks amazing throughout, but there's occasionally slight slowdown when your opponents' cars or the helicopter appear close up

No entertainment medium changes as fast as videogames. The boundaries of the art are constantly being pushed further back, with consumers' expectations changing accordingly. Often a single product is responsible for a major leap forward. *Ridge Racer* is an honorable member of that elite group. Just as *Super Mario Bros* redefined the platform genre and *Street Fighter II* revolutionized the fighting game, so Namco's *Ridge Racer* coin-op has taken the racing game into a new dimension.

Before *Ridge Racer*, the leading arcade racer was *Virtua Racing*. But now Sega's game



Sending these barriers flying is just as satisfying as it was in the arcade version



Unlike in the arcade, an external view gives you a chance to view other cars as they pass



simply isn't jaw-dropping enough to satisfy appetites whetted by Namco's overwhelming texture-mapped graphics. *Ridge Racer* has opened up a whole new world of computer-generated realism which puts plain, flat-shaded polygons — even 180,000 of them per second — firmly in the shade. And now it looks set to repeat that success in the domestic market. Because, as many suspected (but just as many doubted), PlayStation *Ridge Racer* is a near-flawless



Boot-up (a paltry 10 seconds) is made endurable by an arcade-perfect game of *Galaxians* (top). The range of cars means you can pick one that suits you (middle)

ng hardware



Ramming your opponents is always good for a laugh (top). The cars slide realistically round corners (middle) and provide stunning views (above)



Using the outside view is far harder than controlling the car from inside the cockpit — mainly because the sensitivity of the steering hasn't been adjusted. Leaving the tunnel brings the bridge and helicopter into view

conversion. Which is damn impressive when you think that it's the fruit of just six months' labor, on a machine barely in its infancy.

Ridge Racer manages to deliver the richest, most breathtaking 3D graphics seen outside an arcade. The color resolution of the textures is lower than in the coin-op, and some of the finer detail has been lost, but what more than makes up for these drawbacks is the exceptional frame rate. The game hurtles along at well over 30fps, with action faster than that of the coin-op. Occasionally the action jolts

slightly when the external perspective is selected and the screen is packed with cars, but this is a rare occurrence.

Unusually for a coin-op driving game, *Ridge Racer* is more a simulation than an out-and-out racer. The arcade machine was a serious attempt at simulating the driving experience (only the second after Atari's clumsy *Hard Drivin'*), to the extent that a full clutch and gearbox were included, and the deluxe coin-op model even featured a real Mazda MX-5, sans the engine, of course.



In this shot, the replay camera tracks your racer's progress at breakneck speed round a bend



Some of the texture mapping is exquisite. Namco isn't afraid of promoting its classics (above)



At the end of each race you're treated to a playback of the last lap. 1 A side view tracks your approach to a dip. 2 The realtime shading never fails to amaze. 3 Take off. 4 Flying past a *CyberSled* poster at 200 kph. 5 The front wheels hit the tarmac first, making the entire car shudder

Ridge Racer's main failing has always been its lack of different courses. Although this deficiency can't be ignored (the ability to race the four courses backwards having won the standard race is a welcome, but ultimately cheap addition to the original) most players will regard it as far less important than the game's positive aspects. The fact is that *Ridge Racer* is probably the first game of its type to deliver a racing environment which looks truly convincing from inside the car. Electronic Arts' *The Need For Speed* (NG 2) is great from outside, but get behind the wheel and the appeal is proven skin deep. In *Ridge Racer* you don't have to suffer a chugging frame rate and a road plotted to only a few feet in front of you. Here, the track unravels beautifully into the distance, giving you ample time to respond.

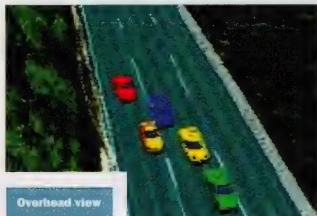
However, anyone looking to *Ridge Racer* for a lasting challenge is likely to be disappointed. The game is relatively easy to finish, although Namco has included a choice of four cars (12, if you score perfect at *Galaxians* while the game is loading), each with different handling characteristics. Given the popularity of time trial options in classic SNES racers like *F-Zero* and *Super Mario Kart*, it will be interesting to see how *Ridge Racer*'s time-trial element boosts its long-term appeal.

After its half-year journey onto the PlayStation, *Ridge Racer* has managed to fulfill almost all expectations. (To satisfy those who

demand a little bit more, Namco maintains that the game also has a few hidden surprises for players to discover. **NEXT Generation** has so far managed to hit the helicopter and land on another car). This achievement is all the more remarkable when you consider the price of the game in Japan — a mere \$60.

From the brief but perfect game of *Galaxians* that you can play while the game boots up, to the dazzling graphics and arcade-perfect music and speech, *Ridge Racer* is the killer app that Namco — and Sony — can be proud of. And this is just the beginning...

ng



Overhead view



There's a splendid variety of sweeping *Virtua Racing*-style views during action replays. The texture-mapped scenery means that sometimes all you really want to do is admire the view

ng hardware



The tunnels were always one of the most impressive features in *Ridge Racer* and this version is no different. Approaching the mouth (top). Tailgating a rival (top right). A gap in the tunnel wall approaches (right)



Cars



Of the 12 cars, the Ryukyu (top left) has good handling, the green Solvalou (top right) has fast acceleration, the pink Mappy (above) grips well, and the Bosconian (right) is a good all-rounder



The course

RR is a circuit-based game which pits you against five computer-controlled cars. From the starting grid in the heart of the city, the track breaks out into the city's outskirts, passes through a long tunnel and climbs up to a mountain pass. After crossing a suspension bridge, you drop down onto a beach-fringed stretch then back into mountainous terrain before a Main Street USA section. Another tunnel precedes the Time Trial route break – a diversion where the tracks bears left and up through a winding section flanked by mountains and roadworks. Best lap times can be stored on the PlayStation's superb memory card.

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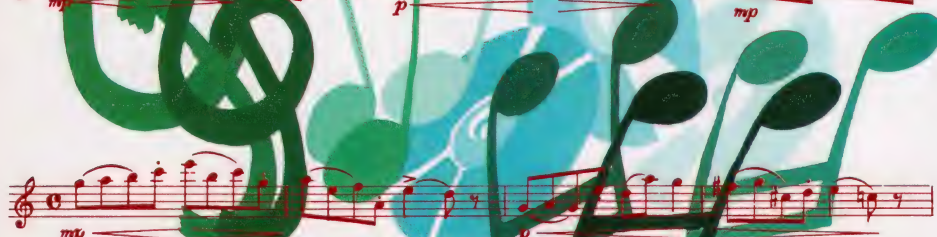
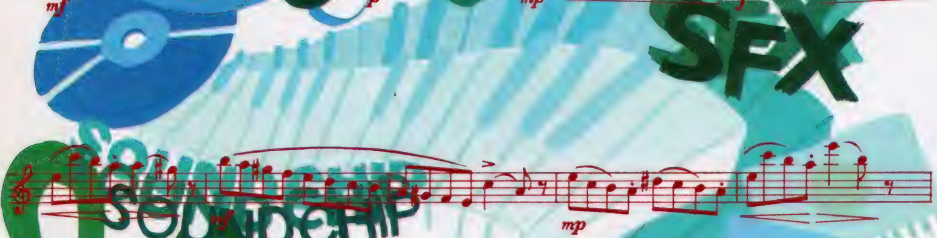
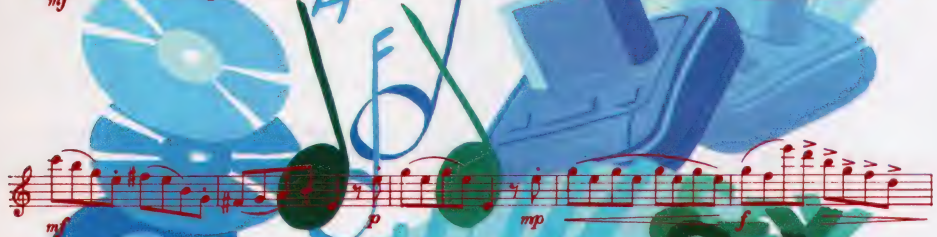
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Making tracks



The noble art of game music



For many years, videogames have relied on music to add atmosphere. **NEXT Generation** explores the history of game music, from the first primitive beeps and squeaks to the sophistication of CD digital audio and new custom hardware

Graphics tend to get all the glory in videogames. Game music is either disregarded completely or dismissed as irrelevant; how can it compete with Gouraud-

shaded polygons and realtime rendering? But, as Gremlin's Patrick Phelan puts it, "Music is an essential part of any computer game. Without it the game appears flat and without dimension." And technological advances in the field of game music have been just as dramatic as those in the visual domain. Now, with the CD age upon us, music in videogames is set to change beyond all recognition.

In the beginning was the Spectrum. The redoubtable 8bit machine simply had a speaker that you could turn on and off. When the C64 appeared it was considered a great technical advance because its specially designed Sound Interface Device (SID) gave the musician three synthesized waveform voices (channels) with which to work. Music was written either on a PC or straight into the machine itself in source code, with the notes, their length and their volume typed in manually.

It was as much a technical exercise as a musical one. Veteran game-music maestro Tim Follin recalls, "The music was secondary to the fact that you were making a sound that was original and trying not to make it sound completely crappy."

But for all its limitations, many musicians regard the era when they had to drive the C64's three-voice chip as the golden age of computer music. The music (described by one composer as 'plinky-planky') was rudimentary, but there was a real sense of challenge involved. Writing the melody wasn't enough; you also had to write a sound driver routine to control the SID that would fit into the memory available — normally 3-5K.

"It was incredibly difficult," remembers Chaos Engine composer Richard Joseph.

"We were doing it in source code all the time so you'd have to put a tune in and go make a cup of tea while it assembled. But it made it all very exciting. (And while it was very limiting, at the same time you could be very inventive if you put the time in.)"

Charles Deenan, who started writing music straight into the C64 as one half of Maniacs Of Noise — responsible for over 300 C64 and Amiga titles — agrees: "Some people writing now think they're really

good with music, but they have all the synths and other things within their reach. With the C64 you only had three voices to work with and you really had to know what you were doing to make things sound good." Many composers likened the SID to a musical instrument in its own right; you had to put the same time and the energy into learning how to 'play' it as you would with a piano or a guitar.

Theoretically, you could only ever get three notes at a time on the SID, but ways were soon found to push the chip beyond that spec. One of the common tricks was to assign short, arpeggiated notes to one voice and trigger them for 1/30th of a second, thereby fooling the human ear into thinking it was hearing more than one note simultaneously. And there were many other techniques. Sampled sound didn't really come into its own until the development of the Amiga's four-voice, 8bit soundchip (though a handful of C64 games like Deenan's *Turbo Outrun* actually managed to use it), so sampling chords to save voice polyphony was, strictly speaking, out of bounds. What was possible, though, was realtime waveform shaping on the SID's square-wave voice (which, according to Deenan, gives the sound more animation)



or filling empty spaces between notes with echoes from other voices. The plink-plank of a laboring C64 soundchip is still enough to bring a tear to many a time-served game composer's eye. Mindscape's Mark Knight, who wrote the music to *Liberation*, admits: "I've got a program on the Amiga and the PC which emulates the C64 soundchip and I come in and think, 'Shall I put a CD on? Nah, I'll listen to some Rob Hubbard.'"

When the Amiga finally arrived, the narrow strictures imposed by the SID were suddenly blown away. Music was able to expand into vast areas of memory (Mark Knight guesstimates that *Liberation*'s music on the standard Amiga occupies 400K), with the only limitations being the desire of developers to release games on a single floppy. The Amiga also heralded the advent of sampling in game music, which meant that most composers moved on to using MIDI equipment.

"I personally still think that the Amiga is the most capable in the music department," says Andrew Barnabas, who has created soundtracks for *Global Gladiators*, *Aladdin* and *SWIV*, among others. "The music I've heard created on it seems to contain a certain discernable quality not found on the other platforms," he added. Maybe that's why the Commodore 32 still uses the same chipset a good number of years after its introduction. Despite only having four channels, one of which was usually saved for SFX, the Amiga's sound processor was certainly the most successful of the 'middle generation' of soundchips.

The Amiga's console contemporaries are accorded rather less respect by musicians. The Genesis in particular, which relies on a 10-channel chip largely dependent on FM (Frequency Modulation), gets short shrift. "Basically, the C64 sounded better," sniffs Barnabas. "Yuck" is Knight's subtle opinion.

Knight's comment on the SNES soundchip is equally verbose. "I don't like to talk about it," he says. However, there are many people who would argue in favor of the SNES's Synthesized sound processor. An eight-voice chip offering 16-bit data-compressed sample playback, it has the potential for spectacular performance. But its problem is memory. The SNES only has 64K set aside for music and SFX — generous compared to the

C64, but stingy in the extreme compared to the Amiga system.

"Say I had to do a conversion of The Chaos Engine for the SNES," says Richard Joseph. "On the Amiga, every level had 250K. You have to squeeze that down into the SNES, which, OK, is a compressed 64K, but it's still only the equivalent of 100K." Charles Deenan circumvented that problem by putting the note data and drivers in the normal 512K and restricting samples to the 64K, but most people didn't. Also, the BRR

"I still think the Amiga is the most capable in the music department. The music I've heard on it seems to contain a discernable quality not found on the other platforms"

Andrew Barnabas

conversions from 16-bit to 4-bit samples were decompressed in realtime, which led to a noticeable reduction in quality.

Now the PlayStation and Saturn are looming. The Saturn contains a Yamaha-designed 16-bit, 32-channel soundchip that is capable of emulating a conventional synthesizer costing \$1,460. The PlayStation supports a 24-voice ADPCM chip sampling at 44.1kHz (the industry standard for CD digital audio). Add to that the fact that both those machines, like most other CD platforms, all support Red Book digital audio and you've got sound potential as far removed from the C64's audio capabilities as texture-mapped polygons moving in realtime are from four-color sprites.

If the introduction of the Amiga soundchip revolutionized game music, the advent of Red Book CD digital audio capability in the game industry is turning it

upside-down. Composers are no longer limited to having to drive soundchips; no longer must they restrict compositions to a certain number of channels. With CDDA, they can treat game music in the same way as any other type of music.

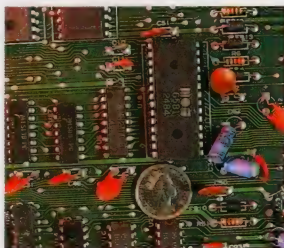
But CDDA is creating its own problems. The overriding issue is quality. The average consumer knows what a CD sounds like and has become used to a certain standard; anything that falls below that standard is going to be immediately pounced upon as inferior. TripMedia was near the completion of its *BurnCycle* project when it realized that the sound just wasn't up to it. Fine for conventional game platforms, perhaps, but not good enough for CD-based systems that are likely to be routed through the buyer's hi-fi. The result was a lot of rerecording and remixing.

And that kind of thing is expensive. A small MIDI preproduction suite alone costs around \$44,000, but now MIDI simply isn't enough. As Jason Clift from game music specialists Sonic Seduction points out: "If you want CD-quality music in games, you have to treat it the same way as any other music you'd produce for a CD." This basically means having access to a recording studio, something that gamehouses are unlikely to provide the capital for themselves. To achieve true CDDA, each channel needs to be separated, then treated and equalized individually. Hence, much of the final work on CD soundtracks nowadays is farmed out for final mixing to companies like Sonic Seduction, who use studios containing \$1.5 million worth of equipment.

But, as Mark Knight points out, money is not the only thing at issue: "I'd like to convince Mindscape to get the equipment

Commodore 64

Given that the Commodore 64 first appeared at the end of 1982, its sound capabilities were truly remarkable. The revolutionary SID (Sound Interface Device) chip provided three channels of synthesized voices, with each voice transmitted in one of four types of waveform. The SID also had the benefit of programmable attack, delay, sustain and release (ADSR) parameters. During the course of its commercial life, the Commodore 64 arguably acquired a larger library of classic game soundtracks than any other machine.





for me but then you still need the experience. You can sit somebody in front of hundreds of thousands of pounds of equipment, but unless they really know what they're doing they're not going to turn out brilliant results."

Then there's the question of memory. Even with compression routines, there's a finite amount of storage space on a CD. Although it might seem ridiculously large compared to the capacity of older platforms, it must be remembered that CDDA takes up quite a bit more memory than a sound driver routine — one minute of 16bit stereo at 44.1kHz eats up 11Mb.

Another obstacle is that the bandwidth of the CD is often taken up by the game's visuals. Graphics are the big selling point in games, and although it's a simple achievement to trigger direct music playback off the CD, other data normally has priority. Charles Deenan was forced to write chip music for Interplay's upcoming *Stonewalker* for the PC because the CD is constantly in use loading graphics into the machine in realtime. "You're lucky to have CD-based soundtracks now," says Mark Knight. "Games are getting so complex that they need the CD for all the data, graphics or code they're trying to pull off them."

Hence the revved-up tech specs of the next generation of soundchips. The hardware manufacturers are obviously pushing for them to be used, but the composers themselves are less sure. The majority of them are passionately committed to CDDA. "Most of the time we'll probably choose to do CD audio," confirms Charles Deenan, "just so we don't have to spend another two or three months redoing the music for another

platform." Currently, Deenan's favorite platform to work on is the 3DO, simply because the double-speed drive means that audio can be streamed off the CD most of the time. However, anything CD-based meets with his approval, because "all the other things are getting to be a pain in the arse." Richard Joseph is firmly in the same camp: "I think everybody's looking forward

"What we're doing now is CD, and if it goes backward from that I'd rather leave the industry. I'd rather hear recorded music played at 20KHz than computer music"

to CDDA, to be honest, although we won't know how practical it will be until people start working on it."

Tim Follin expresses his preference more forcefully. "Basically, what we're doing now is CD, and if it goes backward from that I'd rather leave the industry. It doesn't matter when the alternative is to do computer music. I'd rather hear recorded music played at 20KHz than computer music. The whole idea of computer music was a silly one to begin with. These soundchips were invented for sound effect accompaniment to a game, that's all it was. It's a waste of time if you're doing music that will be covered by sound effects in some poxy little game."

A major reason for the attraction of CDDA for game composers is that computer music, despite the advances in soundchip design, is perceived as being not what it used to be. The technology has certainly enhanced the music, but the extensive use of MIDI and sampling is widely regarded as masking a lack of musical talent. "Samples make things sound



Tim Follin, composer and programmer of a myriad of game soundtracks, is one of the industry's greatest talents

Tim Follin

Although only 24, Tim Follin has carved himself an enviable position in the videogame industry. An accomplished player of the guitar, piano and violin, his career started with free-lance work in the mid-'80s. This was followed by employment with Software Creations, which, at that time, occupied a cramped office above a computer shop in central Manchester, UK.

At the time, the company was porting a range of Capcom coin-ops to home computer formats. Tim created a range of truly excellent soundtracks for its conversions of games such as *Bionic Commandos*, *LED Storm* and *Ghouls 'n' Ghosts* (arguably his finest hour, putting Capcom's SNES tunes to shame) for computers including the Spectrum, C64 and, later, Amiga.

Tim stayed with Software Creations until a year ago, having composed and programmed acclaimed soundtracks for *Solstice* (NES), *Target Renegade* (NES), *Spider-Man And The X-Men* (SNES), *Equinox* (SNES) — notable for ethereal, haunting music — and the fabulously upbeat *Plok!* (SNES). He later was able to create a range of widely regarded rock tunes for Interplay's *Rock 'n' Roll Racing*, also found on the SNES.

Tim currently works for Malibu Interactive in Warrington producing audio CD soundtracks for Sega CD. "I never want to write chip-generated music again if I can help it," he said. To be honest, I really don't see my future in the games industry — I want to get into making films."

Fans of his music will be hoping he changes his mind. If he achieves his aim, the videogames industry will lose one of its greatest talents.



Commodore Amiga

The custom sound chip inside the Amiga is one of the most impressive features of the computer's original PAD architecture. Commodore's 'Paula' chip has direct memory access delivering four channels (two stereo pairs) of 8bit PCM, with nine octaves of amplitude and frequency modulation. By far the best feature is its ability to play sampled voices and instruments at different pitches, with impressive results. The Commodore Amiga's library includes some of the best game soundtracks ever written.



Charles Deenan is audio director at Interplay US, but he started writing game music with Maniacs Of Noise

Charles Deenan, Interplay

Back in 1986, a Dutch duo called Maniacs Of Noise set up a company to create music and effects for the Commodore 64. Co-director Charles Deenan was just 16 when he decided to team up with friend and musician Jeroen Tel, and the pair went on to create some of the most memorable soundtracks heard on the C64 and Amiga.

"It kind of started as a joke," recalls Charles. "Basically, I programmed, doing drivers and sound effects at first. After the first few games, for which Jeroen did the music, I tried to do some music as well. I'd have to say that the first few attempts were pretty horrific." Hewson obviously didn't think so; the publisher of accomplished 8-bit games like *Stormlord I & II*, *Cybernoid I & II* and *Zanzara*, which pushed the C64's sound chip to its limits, made much use of the Maniacs' talents. Companies like Probe Dynamic, Digital Design and System 3 also employed the Maniacs for many of their games, and by the time they had progressed to the Amiga in the early '90s they had written music for more than 300 computer games.

Charles moved to the US in 1991 to join Interplay, and he now heads their seven-strong audio department in Irvine, California. Among the games he's created music for are *Out Of This World*, *The Lost Vikings*, *Castles II* and the very long-awaited *Stonekeep*. "It's kinda funny to see where game production has gone during the last four years," he reflects. "My main tools used to be a C64 and a copy of Turbo-Assembler. And now, we're using studios with about \$200,000 worth of audio equipment."



absolutely brilliant, even if hardly any work was put toward it in the first place," says Barnabas. It's a rather Luddite attitude in many respects — similar to the purist revisionism that the music industry went through at the dawn of techno — but one which acknowledges a significant factor in the decline of computer music as an artform — the feeling now is that "anyone can do it."

The widespread use of, and, to an extent, reliance on, MIDI and sampling

"It's all about money these days. If music for a game would take three months, the developers will say, 'Let's find someone else.' And that's kind of pissing me off."

Charles Deenan

became necessary as companies released more games on more platforms. The result was that music simply became the finishing touch on an incredibly fast production line. Admittedly, some of the early composers like Hubbard could churn out great music at a spectacular rate of knots, but production lines aren't actually renowned as being conducive to creativity and individuality. "It's all a matter of money these days," opines Deenan. "If music for a game would take three months, the developers will say, 'Let's find someone else,' even if that person was really good. That's kind of pissing me off."

This situation has understandably resulted in a great deal of cynicism among game composers, disenchanting with game music being regarded as a 'bolt-on extra at the end,' in the words of Sonic Seduction's Dan Parker. Many composers never even see the game they're writing for until it's

close to completion. Barnabas relates a story of just being handed a list of titles for tunes for a table on Pinball Dreams II, a copy of the first game and nothing else.

"I couldn't even see what the game looked like," he complained. "It was like composing in the dark."

CDDA is widely seen by many composers as the catalyst to improve their professional circumstances. Things are changing already, as software houses commit themselves to larger projects and release fewer games. Often the musician is still only brought in during the final stages, though some musicians are now being consulted from the start. Budgets are rising too, as it's realized that music is actually an integral part of games. Even for games destined for more conventional media, film composers are starting to be commissioned, or the in-house one is starting to emulate that

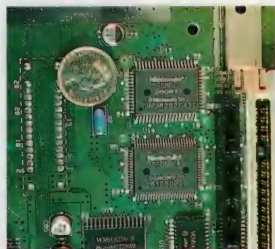
cinematic style more closely. Sound is finally gaining the status it should have had from the start. "Music is a fundamental part of the very essence and atmosphere of the game," asserts Dan Parker. "Now that there's much more capability there, the whole position of music will change."

Game composers now have the opportunity (not least by virtue of the CD format) to produce music that is virtually indistinguishable from film soundtracks. The complexity and the potential of the new technology at their disposal is amazingly enormous; no longer are they constrained by the abilities of a particular soundchip. But technology is only one half of the major equation; creativity is equally, if not more, important. And, sound quality aside, will game music really be any better in the CD age than it was on the C64?



SNES

Anyone who has ever heard of the SNES classics like *Castlevania IV* and *Equinox* won't be surprised to learn that the machine has some very powerful sound hardware. Its Sony-designed 16-bit soundchip delivers eight channels of stereo PCM (pulse code modulation) while offering an adjustable sampling rate of between 6 and 48kHz. In addition, the chip also has hardware-assisted effects like digital echo, although *Equinox* uses echo effects created in software to save memory — the SNES's 64K sound RAM is, essentially, its biggest drawback.





For the record



Nomis Studios, as used by Sonic Seduction (Paul Weller recorded *Wild Wood* here)

As far as sound reproduction is concerned, there's no argument about the fact that CDDA is superior to chip-generated music. New games hardware may have multiple voices, but compared to a CDDA track produced, say, in the 64-track Nomis Studios used by Sonic Seduction, it's lightweight.

Sound drivers contain basic information on what instruments should be used, what note is to be played, for how

long and at what volume. A recording studio, however, splits the soundtrack into its component parts and assigns each one a separate channel on a mixing desk, through which it can be individually treated and controlled, before the music is mixed back down to two-track stereo.

The important thing is to ensure that instruments with similar frequency ranges don't clash in the same sonic space. Every channel on the mixing desk has a fader and equalizer: The fader controls the volume, while the equalizer governs the level of any chosen frequency. For example, a bass drum and a bass guitar occupy similar frequencies, so the sound engineer can decide to cut the bottom end and boost the top end of one of the instruments and do the reverse with the other. He must set the volume, the equalization and the position of that sound in the stereo span before it can be recorded to tape.

MIDI is far less adaptable; keyboards often only have a stereo output so sounds can't be separated.



Banding together



Alien Sex Fiend were responsible for the ambient soundtrack heard in *Inferno*

The big trend in game music at the moment is to rock bands. *Inferno* comes courtesy of a soundtrack by Alien Sex Fiend; *Acclaim's* Maximum Carnage features Green Jelly; *Microcosm* has Rick Wakeman; and EA's *3DO Road Rash* thrashes along to music from Therapy? and Soundgarden, among others.

Although such maneuver provide a nice opportunity for reciprocal promotion, the logic of depending on narrowly defined musical genres is questionable. A soundtrack pivoting around alternative metal might increase sales to that sector of the market but is just as likely to alienate other, much larger, sectors.

Another problem is money. In a

recent issue of *Making Music* magazine, *Renegade's* Graham Boxhall stated: "We get a lot of interest from bands but they misunderstand the commercial aspects. We've had approaches from well-known bands like Utah Saints and The Shamen, but it wouldn't be profitable for us."

The potential for multimedia abuse of copyright is enormous. Mark Isherwood, general licensing controller of the Mechanical Copyright Protection Society, which distributes royalties to artists, has warned that reducing the royalty rate for CD-ROM music from the audio one (8.5%) could lead to a 'long-term erosion of income' for musicians. After two years of negotiations, the MCPS still has 'major problems to overcome' before it can realize its aim of introducing a court-enforceable Standard Licensing Scheme.

Rock music in videogames is still a novelty. Currently, events seem to be mirroring the film industry; Charles Deenan has hired an undisclosed 'big name artist' for an intro sequence, and *Burn:Cycle's* score will be available as a conventional audio CD. But how long the music industry — not exactly known for being profit-shy — will tolerate the games industry's traditionally low fees is open to question.



German musician Chris Hülsbeck has established himself as one of the world's best game composers

Chris Hülsbeck

Chris Hülsbeck is another veteran C64 soundtrack turned professional game musician. At a mere 26, he now works in Langen, Germany, for Kaiko, a company which is probably best known for the excellent *Amiga* shooter *Apolydos*, although his energetic soundtracks for Factor 5's *Turrican* game series are among his most accomplished works.

Chris' career started at the age of 14 when he entered a music competition in a German games magazine and managed to take first prize with a piece entitled *Shades*. This was good enough to land him a job at Düsseldorf-based Rainbow Arts (now called Softgold), where he produced the music for many games, including canned *Mario* clone *The Great Giana Sisters* (C64 and *Amiga*), *X-Out* (*Amiga*), *Jinx* (*Amiga*), *R-Type* (*Amiga*) and *Z-Out* (*Amiga*).

Chris will soon be writing music for the Sony PlayStation — and, encouragingly, will be programming it on the machine instead of just streaming digital audio. "The PlayStation has extremely good sound hardware," he claims. "There are similarities to the SNES but you've got 512K sound RAM, and there are 24 voices and a reverb processor to play around with. I guess you're looking at (approximately) \$1,800 worth of audio equipment on the PlayStation alone."

In Germany, Chris has released several audio CDs of his own music, many of which are truly superb. His latest release, entitled *Rainbows*, is a compilation of previous music that has been reworked from older Rainbow Arts' games.





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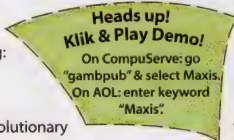
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Virtua Fighter



Sony isn't the only company with a new machine on the block. Saturn is still leading in Japanese sales, largely because of one particular fighting game

Format: Saturn

Publisher: Sega

Developer: AM2

Price: ¥7800 (\$75)

Release date: Out now (Japan)

Origin: Japan



After each round in *Virtua Fighter* there's a short replay of the closing seconds of the action, showing the last moves from a different angle



Virtua Fighter's attract mode and post-fight replays give you the chance to admire the superbly designed and animated characters

Not since the market-shaking Sonic has Sega had so much depending on the success of one game. The launches of the Sega CD and the 32X were both just sideshows compared to the launch of the Saturn — the first next generation machine from one of the big players in the videogame field. As the lukewarm receptions faced by the 3DO, CD-I, CD32 and Jaguar have proved, new hardware needs great software to sell it, so it's no exaggeration to say that *Virtua Fighter* is Sega's most important release for years.

Sega entrusted the Saturn conversion of *Virtua Fighter* to the game's original developers, AM2 (Sega's biggest arcade division). It's easy to see why. Saturn *Virtua Fighter* has all the pulling power of the arcade version, including the swooping, gliding game camera, the stylish polygon characters, the totally convincing

ng special

animation and the compulsive gameplay.

The first thing that strikes you about *Virtua Fighter* is its graphics. They were impressive enough in the original, but on the Saturn, under the kind of intense scrutiny you can never give a game in the arcades, they emerge as astounding.

Although the characters (which are all made up of around 1,200 polygons) look good in static screenshots, it's the superb animation that brings them to life. The full roster of arcade moves is included in the Saturn version, and every movement is realistically animated and weighted. For instance, Pai, the fastest character, flicks out quick punches that make the heads of opponents snap back. Her 'lightweight' close attacks are also delightfully choreographed — she grabs an opponent and trips them over her outstretched leg or twists their wrist and forces them to the floor.

Conversely, wrestler Jeffrey has several lumbering holds and throws. He moves in, grapples with a character, struggles to hoist them onto his shoulders and then slams them to the ground. It all takes a satisfying few seconds to execute and, in a real show-off touch, Jeffrey even takes time to adjust his hold on an opponent in his arms.

Virtua Fighter's 3D characters have a presence that 2D sprites just can't match.



A selection of *Virtua Fighter*'s special moves (left to right): Jeffrey picks up another Jeffrey by the nose — press down and punch when in close. Sarah takes out Wolf with a clothesline move — press forward, forward then punch. Lau hoists Kage over his shoulders and slams him into the ground — press back, then forward, then press punch when close

The characters really do seem 'alive,' whether they're throwing a punch, unleashing a special move or reeling from a blow.

Of course, the action wouldn't be the same without the fluid game camera, which pans about the two fighters, zooming in and out as they move around the arena and occasionally cutting to a



When any fighter knocks an opponent to the ground he can jump in and attack them while they're down. Here, Lau floors Wolf with a punch and (by pressing up and B) leaps in feet first, stomping on his stomach and causing a whole load of damage. (Press B twice while Lau is in the air and he'll jump on his opponent a second time)



new angle. The camera always maintains a position which doesn't disadvantage either player. Only in replays does it switch to more unusual angles (which, annoyingly, often prevent you seeing your finishing moves again).

For all the game's technical innovations, there's an elegant simplicity about *Virtua Fighter*. Unlike Takara's PlayStation title *Toshinden*, *Virtua Fighter* is basically a 2D beat 'em up with 3D graphics. The characters move on a single axis, with only throws and falls sending them to different parts of the arena. Just like in sprite-based games, they can't circle about each other or attack from the sides (taking them from behind, however, is encouraged).

All the moves are instinctive and the characters are a well-balanced bunch, offering a choice of power, speed or agility, plenty of possible combos and rewarding special attacks. And if you beat the game in one-player mode, you face a bonus character, Dural, and bring up a new play option — Ranking mode.

However, in stark contrast to, say, *Street Fighter II*, everything is controlled with just three buttons: punch, kick and guard. This doesn't compromise the gameplay, though. In fact, it amplifies it. Mastering all the characters' moves — all have at least 10 and most have close to 20



Beat all eight characters and you face bonus character Dural, a metallic polygon woman

— requires less thumb pad dexterity and more button work. The combat is swift, giving the game a steep learning curve which makes it a significant long-term challenge.

The game has just one minor failing — the fact that polygons (which are effectively distorted sprites on the Saturn) occasionally disappear and characters break up in certain action replay views. On the other hand, CD access time is commendably quick and difficulty levels, time limits and controls are all fully adjustable to suit one's own personal taste.

The Saturn version of *Virtua Fighter* is an exceptional game in many respects. It's arguably the first true 'next generation' console game, fusing the best aspects of combat gameplay with groundbreaking animation and gorgeous sound (CD music and clear samples). In the arcades, *Virtua Fighter* made people stop and look. On the Saturn, it will make many people stop, look at their bank balance and then happily fork out their hard earned cash for Sega's new game machine. Over to you, Sony.

ng



The character selection screen (top). Kage forces Jacky out of the arena to win by 'Ring Out' (above)



All the characters in *Virtua Fighter* have their share of great-looking special moves, but the most spectacular is Wolf's spinning throw. Get in close, quickly do a semi-circle with the bottom of the pad toward your opponent and press jump. Wolf then steps in, grabs his opponent by the legs, spins them around and tosses them across the arena



ng special



Special moves

Each of the eight *Virtua Fighter* characters has a variety of special moves. Wrestler Wolf has the fewest with just ten — but they're mostly powerful throws and forearm or shoulder charges. Siblings Jacky and Sarah share the same controls and some of the same moves — each has a total of 21. All the characters have throws and flying attacks to hit a fighter who is lying stunned on the ground. And, surprisingly, all the moves are executed with just three buttons — punch, kick and guard — plus the directional pad. The more complex special moves trade speed and ease of use for sheer power.



INFERNO

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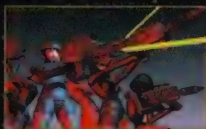
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The grudging game machine is now the center of a billion dollar industry. But the PC is under serious threat from Sega and Sony, and the very standards that defined its original existence could now lead to its downfall



ng hardware



Parasite or partner? Microsoft has dominated the PC's periphery businesses, sometimes setting much-needed standards, at other times holding progress back...

If the PC were a human patient, you'd have to say that, at first glance, the prognosis was not hopeful: Bad circulation, a nervous condition that results in one hand not knowing what the other is doing — and chronic constipation

dealing in room-filling behemoths, didn't quite know what to make of this tiny love child. There are some who say that, after nearly 14 years, they still don't...

The early history of the IBM PC is a soap opera of compromise piled on afterthought. We can journey back to 1981 to witness the genesis of the PC. In 1978, Intel had introduced the 16bit 8086, but cost and memory address considerations put a somewhat emasculated version, the 8088, in IBM's first boxes. There was a paltry 16K RAM, no hard drive, and only low-density floppy storage (or even tape storage) was offered, along with monochrome video. The 80286-driven AT of 1984 meant a jump in speed as well as an upgrading of peripherals, notably hard drives and high-density floppy drives. Perhaps more importantly, the 286 was the first Intel chip that could run in protected mode, meaning it could address memory beyond the 1MB limit of the 8088 (see below), at least up to 16MB. EGA 16-color video was just making an appearance, giving software designers — and especially game designers — ideas about what could really be done with the PC.

The first 32bit 386 appeared in 1986, and in what is now seen as a harbinger of future chaos, it wasn't an IBM, but a Compaq. With corporate inertia matched only by perhaps General Motors, Big Blue managed to jump on the 386 bandwagon with the PS/2 line of computers, which

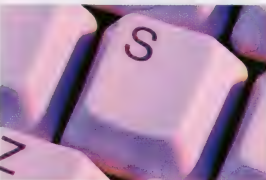
featured the brilliantly engineered, poorly received Microchannel architecture.

The confusion that resulted from this parting of ways between IBM and the rest of the burgeoning PC industry might have been enough to kill the PC's future as a gaming machine, had it not been for the dramatic speed increases of the 386, teamed with the more brilliant graphics of the VGA video standard and the first sound modules from Roland, Ad Lib, and Creative Labs. The 486, introduced in 1989, was essentially a 386 chip teamed with a 387 math coprocessor, but the internal cache controller allowed it to operate at essentially three times the speed of its predecessor.

The 64bit 586/Pentium brought a quantum jump in performance which further cemented the PC's gaming status, despite the recent reports that the Pentium has a flaw that could cause incorrect results running programs that require a lot of calculation. These are blazingly fast machines that can adapt to a wide variety of gaming requirements. At least, they can if you've lived a good and wholesome life... or better yet, if you happen to work for IBM.

Have you heard this one before? You buy a new sound board or CD-ROM drive, and rush home to install it in your PC, already feeling the goose bumps of anticipation over all the great games you'll enjoy. It's just a matter of opening up the computer and plugging in the board, or at worst, tightening down a few screws in the drive bay. Five hours later, you're still puzzling over why the damn thing won't run despite the fact that you've made certain there aren't any interrupt conflicts, the DMA channel is right, and you've actually remembered to plug the power cord back into the wall socket. When you've spent two or three thousand dollars on a new box, it's awfully difficult to form the question, "Why did I actually buy this?" but you know it's there, lurking in your mind.

So, just why did you buy a PC? As



simplicistic as it sounds, the answer is "because it's there." After all, what else is there? At least, what else can do all the things a PC can do — word processing, spread sheets, on-line communications, etc. — and still play games as well as anything on the market, when it's running right? Don't even allow the names Atari, Sega, or Nintendo to form in your mind.

Paradoxically, the PC's greatest asset — its open architecture — is also its greatest liability. Open architecture refers to the adaptability of the PC design to accept devices of varying configurations and capabilities. The thinking was that using an open architecture would encourage development of third party add-ons to enhance the PC. Well, that was fairly good thinking except for one point, with the operative word being the aforementioned adjective "varying." Vary they did through the years, aided in no small part by IBM's laissez-faire attitude in early PC history. It can be argued that had Big Blue ruled its domain with the iron fist (in a warm and fuzzy glove) Apple wielded with the Mac, the constant problems with interrupts, memory addresses, DMA channels, and so forth that PC stalwarts 'revel' in, would be dim and unlamented memories. On the other hand, aren't the words 'Macintosh' and 'gaming' mutually exclusive terms in the minds of most serious gamers? It still remains a sad fact, however, that the smorgasbord selection of peripherals, while giving the PC near-infinite flexibility, has nonetheless contributed to more headaches, gastro-distress, and uprooted follicles than anything this side of the IRS.

Like garlic to a vampire, the message "insufficient memory" has thrown many a gamer into convulsive fits. Some of the newest games are so hungry for base memory that they seem to have been designed on some other planet where they've never heard of the 640K limit of the PC, or more specifically, of DOS. There's nothing in the design of even the original 8086/8088 that proscribes that hallowed 640K — that's a legacy of Bill Gates and Microsoft. To this day, all programs that run under DOS must conform to this limit. As DOS has improved, it has been able to address ever-increasing amounts of RAM. But it still cannot see the memory as a contiguous whole. Rather, it divided RAM into a block of 640K, another block of 384K (used for



Picking up the PCs



- 1. Power supply** — useful for keeping your PC up and running, not so useful in the interfacing-with-coffee/soda/Velveeta squeezable cheese department.
- 2. CD-ROM drive** — a 300k/second double-speed drive gives MPC1 compatibility, suitable for practically all currently produced multimedia applications.
- 3. Tape back up** — a life-saving means of archiving large chunks of data.
- 4. 3.5" floppy disk drive** — the departing standard of data transportation. With over 80% of PC games enthusiasts now sporting CD-ROM drives (and rising), the trusty old 3.5" drive is now best used for quickly transporting small amounts of data (files, pictures, etc.) between un-networked machines.
- 5. Hard drive** — If the motherboard and CPU is the heart of a PC, then the hard drive has to be the, um, lungs (or something equally important and vital). Capable of data transfer rate at about 800k/second and able to store (in this case) 500MB of binary code.
- 6. Motherboard** (featuring CPU) — It's obscured here, but on the motherboard you'll find the CPU and 16MB of RAM. In this case, an Intel Pentium-90 chip shielded behind its own personal fan cooler.
- 7. SoundBlaster™ card** — A myriad of competing soundcard manufacturers are perennially fighting out market share percentages, making hopes for one universal standard slight.
- 8. Modem** — The de rigueur PC accessory for the 90s. Our V.34 enables 28,800 baud communication, but even a 9,200 baud connection offers enough speed for most applications.
- 9. Drive controller card** — Plugs into a 16bit slot on the motherboard and handles the flow of data between the floppy disks, the hard disks and the motherboard.
- 10. Video adapter** — Many modern PCs use a Local Bus connector for this, the most performance-critical hardware in the machine.

ng hardware



Whereas it was hard to imagine at the start of the 80s that anyone would use the whole 640K of a PC's conventional memory, it's now hard to believe that anyone could design such a stupidly low limit. The PC's evolution has surpassed all predictions and expectations

"It's inevitable that the PC will fall behind the power of the new machines from Sega and Sony, they've been designed specifically to generate polygons. What Intel needs is a redesign, and I don't think the answer lies with the Pentium"

Peter Molyneux, Bullfrog Productions

housekeeping duties such as controlling video), and then a final chunk, the size of which depends on how much extra memory you could afford to spring for. In a nod to the old bootable disk games of our youth, some game designers have taken to providing their games with a dedicated operating system that does an end-around DOS, but the problem will only be solved completely when DOS finally dies its long overdue death.

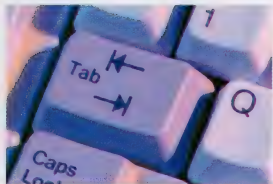
Take the original 8bit ISA bus...please! PC owners soldiered along gamely with the Industry Standard Architecture albatross for years, and even the advent of the 16bit ISA bus couldn't kill it entirely. A computer's bus is like a telephone exchange, allowing the processor to communicate with its peripherals. If you've limited the size of your bus to say, 8 bits, then no matter how fast a processor or peripheral is, the data flowing between them can move only so fast. The bigger the bus, the faster the flow. Even a 16bit bus can quickly become a bottleneck. IBM tried to jump several spaces at once with the introduction of Microchannel bus architecture in its PS/2 line of 1988, which would not accept the older peripheral boards. The rest of the industry, chafing at IBM's assertiveness,

headed off in a different direction, and came up with a 32bit bus known as the EISA (Enhanced Industry Standard Architecture) which could still use older boards while offering performance close to the Microchannel bus.

Bus size was only part of the problem, however. One can force a lot more water through a bigger hose, but only if there is the pressure to do it. With the relatively slow speed of the ISA and EISA buses, problems were bound to arise as the faster processors came on-line. Once again, there were two distinct solutions to this problem, PCI (Peripheral Component Interconnect) and VLB (Vesa Local Bus). The VLB operates at the same speed as the processor it's connected to, but due to a lack of buffering it is not nearly as fast as the much more complex and expensive PCI design. At first the PCI bus was relegated to up-market machines — primarily Pentiums — and although Vesa Local Bus has a much larger user base, it was always assumed that PCI would eventually become the standard. That is, until the manufacturers backing VLB upped the ante with an improved Vesa standard. So now, are your eyes glazing over yet?

And speaking of glazed-over eyes, back to that sound card you were attempting to install. You may have a friend or acquaintance who has made the slide down that slippery slope and succumbed to (what many PC gamers describe as) the dark side. And yet, you may have seen that Mac minion toss a board or another drive into his or her machine, popped the cover back on, and jumped right back into computing, hardly breaking stride. Thanks to the Mac's NuBus architecture, the daunting acronyms IRQ and DMA never cross a Mac user's lips in vain. But the PC, victim of haphazard and tangential developments by a seemingly infinite number of companies, has no capacity to acknowledge and allow for the peripherals you might want to install. Neither can it tell you when you've managed to give two peripherals the same interrupt setting or





address, unless you consider a flat refusal to work as an illuminating error message.

Indeed, merely the day-to-day hassles of running PC software is too much for many people. John Kavanagh, VP Development of Domark Software believes that "a lot of people are scared of the PC because they simply don't understand the relationship between Windows, DOS, config.sys and autoexec.bat files and the need to reconfigure your machine each time you want to run a different application. This certainly scares off a lot of novices."

But it's not just a problem for consumers. It adds a heavy burden to the developers as well. Origin's Chris Roberts, producer of Wing Commander, explains "The PC can be a real pain in the ass — and I wish it wasn't. We spend a whole lot of time with all the different sound cards, video cards and controllers but we can never test all the different combinations and this has to lead to many gamers having compatibility problems. So we're excited about anything that leads to a standard, but for now the ease of use issue is definitely a road block to making the PC a mass market gameplaying item."

So what have we got here?

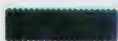
If the PC were a human patient, you'd have to say that, at first glance, the prognosis was not hopeful — bad circulation, a nervous condition that results in one hand not knowing what the other is doing, and chronic constipation. The brain is quite sharp (give or take a decimal point), but some kid with glasses performed a lobotomy on it about 14 years ago, and the patient has never been quite "right." And on top of it all, it has a lot of distant cousins huddled around its assumed death bed. Should we gamers call in Dr. Kevorkian? Will you be happy with the answer "that depends?"

Certainly, the chaos that has surrounded the PC since its birth has given pause to a lot of people who are primarily



Efficient Chips

Intel has maintained a stranglehold on the market for PC central processing units (despite many cynical/enlightened users referring to the 'Intel Inside' badge as a warning sticker). But its reign is perhaps under threat. Rising competition from Motorola's own PowerPC chip and the production of legal copycat chips such as the Cyrix Cx486SLC — following a lengthy court battle — are thorns in Intel's side. Add the recent announcement that the Pentium chip actually is bugged (affecting some high-end math calculations) and Intel's grip is visibly loosening.

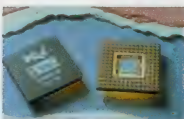


1. The 8086 processor, which dates back to 1978. The newly designed 16bit architecture in this chip was created specially to fill the gap while everyone was waiting for the completion of the IAPX 432 CPU. This design proved to be something of an inspiration, and set the standard for all the later designs of PC processing units.

2. The 8088 processor, launched in 1979. This was the first 16bit processor with an 8bit internal architecture. IBM chose this as the processor for its first mainstream Personal Computer, the IBM PC. Running at 4.77MHz, the PC looks fairly feeble by today's standards, but it was this little lump of silicon that first made an affordable home computer possible.



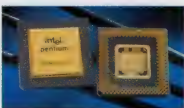
3. The Intel 286 processor family, dating from 1982. At its introduction, the 80286 provided about three times the performance of any 16bit processor on the market. Aimed at the high end of the 16bit market, it featured on-chip memory management, enabling users to conduct different task at the same time. It was also the chip used in the second-generation IBM AT machine.



4. The Intel 386 CPU, which made its debut in 1985. This was the first microprocessor to extend the binary compatibility of Intel architecture family to 32bits. The 386 uses 275,000 transistors, and runs at what was then considered a mind-bending speed, 5 million instructions per second (MIPS). The 386 is now considered the entry-level processor for the PC.



5. The 486 CPU, which first appeared in 1989. At introduction, the 486 with its 1.2 million transistors offered the same performance as a standard mainframe of the time. Improvements came in the form of the DX2, DX3 and DX4, but in 1995 a 486 is barely good enough to give you a decent go on Wing Commander 3...



6. The Pentium chip, introduced officially in 1993. The Pentium is claimed to offer five times the performance of the 33MHz 486DX chip. Legal problems (evidently they were unable to copywrite it) prevented those imaginative types at Intel from naming this the '80586', but it's often referred to as the P5. Currently the state-of-the-art...

ng hardware



No new PC is complete without a CD-ROM drive. The multimedia dream has been marketed to great effect in the last two years, and titles such as *Myst* and *Seventh Guest* were responsible for justifying the extra expense to gamers



Within a year, DOS will be all but dead, as either IBM's OS/2 Warp or Microsoft siblings Windows 95 and Windows NT give it a final shove over the precipice

in the market for a game machine. We've all heard the promises over the years of how the next generation of PCs would do away with all the memory problems, peripheral incompatibility, and the other gnawing little annoyances that have caused so many to run screaming into the night. After a while, the tendency is to stop listening, let alone believing.

How about this? PC

evangelists will point to five very good reasons why the PC has a rosy future:

to add a CD-ROM drive without developing a cauliflower ear from holding for that one on-duty tech in the manufacturer's service department? Windows 95 will feature the first taste of what will be the Plug and Play standard. It still won't actually set up a peripheral for you, but it will at least let you know what interrupts and DMA channels are in use, and which ones are free.

2) Prices for the Pentium will continue to plummet, partly because of the economics of scale, partly because Intel will be forced to lower prices more quickly to staunch any hemorrhaging the calc problem might start. And partly because of new, fast and cheap Pentium clones from the likes of AMD, Cyrix, and the interestingly named NextGen, as well as a nebulously perceived challenge from IBM's PowerPC.

3) Even gaming is evolving away from its customary niches, an evolution that will accelerate as the information infrastructure takes final shape. Who can really say what sort of cybergaming environments will capture the imaginations of gamers in the next couple of years? What we do know is that the best gateway to this virtual world is, and will be for the near and foreseeable future, the PC and its many descendants.

4) The concept of "Pop in a cartridge and go" continues to exude considerable charm for a large segment of the gaming population. Many of these people will never miss for a second the other capabilities a PC offers, and it will always be thus. But for many, the initial experience of gaming has been but a stepping stone to deeper involvement in computing, involvement that cannot be realized with a fully dedicated game machine. Do people really want to settle for just a stepping stone?

5) Estimates of the number of PCs in the home range as high as 40 million, with the number of new PC gamers growing at 27% a year (compare to under 10% for industry). And this kind of market commands attention. Origin's Chris Roberts explains "the deal is this, there is so much momentum behind the PC now that

1) Within a year, DOS will be all but dead, as either IBM's OS/2 Warp or Microsoft siblings Windows 95 and Windows NT give it a final shove over the precipice. Windows 95, in particular, promises to cure most if not all of the PC's ills. Got 16MB of RAM? You'll be able to use it all, and in one big chunk if you like, with these new operating systems. All three replace DOS and Windows 3.X, yet all can run programs written for these two old-timers, in some instances even better than the originals. And they are true multitasking, multithreading programs with capabilities that will finally show the Pentium chip to its best advantage. Want



improvement has to happen. The 30 million plus installed base will drag the PC — kicking and screaming if necessary — towards the 'plug 'n' play' standard. This trend is irreversible, and I predict that within four years the PC will be even more simple to use than the Macintosh.

Sounds impressive? Sure, but the PC's future is by no means guaranteed. A lot of people pin the PC's current popularity as a game machine purely to the fact that there is no other option: the PC is the high-end game machine by default. And come late 1995, PlayStation, Saturn and Ultra 64 could be finishing off the job that 3DO and Jaguar have started. The PC is under serious threat of being usurped as the ultimate game set up.

PC antagonists will argue that the PC is too cumbersome, too expensive and (ultimately) too underpowered to compete with this new generation of game machines. And as soon as the numbers of PlayStations and Saturns sold begins to even look like achieving the numbers sold by Genesis and SNES, then game developers around the world will turn from the PC to the dedicated machines.

So what is the future for the PC? Nobody knows for sure. Peter Molyneux of Bullfrog believes that "it's inevitable that the PC will fall behind the power of the new consoles from Sega and Sony — they've been designed specifically to generate polygons. What Intel needs is a redesign, and I don't think the answer lies with the Pentium." Whereas Origin's Chris Roberts is cleverly "carefully optimistic" that Windows '95 will be enough to ensure the PC's continued status, at least for the foreseeable future.

The proof — as they say — is in the pudding. And so next month, **NEXT Generation** leaves the cerebral realms of speculation for the more hands-on business of talking to developers on the front line. Is the PC games scene set for collapse? Or can PCs truly become the universal tools suitable for both work and play, that IBM intended them to be back in the days of the original XT's?

Watch this space.

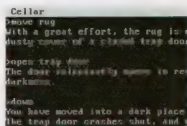


NEXT MONTH

What's wrong with the PC? — Part Two: **NEXT Generation** talks with PC games developers around the globe to find out how big the problems are, and how they are being dealt with.

Landmark Games

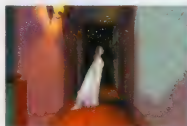
The relationship between PC hardware and software is one of mutual justification. Often, the purchase of a new piece of hardware is vindicated only once the killer application (very often a game) has demonstrated the new hardware's power. Similarly, new software is dependent on a sizeable installed hardware base to make the development economically sensible. Here are some noteworthy examples of landmark games that have specifically affected the recent hardware evolution of the PC...



Zork — that great granddaddy of many of today's titles — could be played on any PC: Let's face it, it doesn't really matter how fast the text scrolls. But from this point on, the chicken and egg process of better graphics leading to greater expectations left this simple format in the dust



Strike Commander was a brave attempt by Origin — riding on the wave of *Wing Commander*'s success — to provoke a mass upgrade from 386 to 486. Although the title was substantially delayed, it was still 'too much, too soon' for many PC gamers and never fulfilled its potential



Seventh Guest, more than any other game (although *Rebel Assault* and *Myst* may stake rival claims), finally convinced PC gamers en masse that a CD-ROM drive was a necessity, and not simply an expensive luxury. *11th Hour* — the sequel to Trilobyte's 'interactive movie' — is expected later in 1995...



Doom spread throughout the PC world faster than any game previously — largely due to Id Software's innovative shareware policy of distribution. In its wake comes not only a plethora of copycat titles, but a demand for hardware networking and the multiplayer action it enables. *Doom* got computers talking to each other, and now it'll be hard to shut them up...



Wing Commander 3 supposedly runs fine on a decent 486 set up, but you still need 16MB of RAM and Origin makes no secret of the fact that a Pentium is really required to get the most out of its latest epic. Producer Chris Roberts: "We're not afraid to lead hardware sales a little, and we believe that Pentium will soon be the standard"



Magic Carpet from Bullfrog (the company responsible for *Theme Park* and *Populous*) has been designed with ultimate flexibility in mind, and typifies the growing trend toward 'scalable' graphics and multisystem compatibility. Any PC can run *Carpet*, with screen resolution and detail varying to maintain a constant game speed

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Toh Shin Den **PlayStation** Dark Forces **PC** Boxer's Road **PlayStation** Hudson Soft's Super Bomberman 3
SNES & Battle Heat **PC-FX** & Team Innocent **PC-FX** Iron Assault **PC** Motor Toon GP **PlayStation**

alphas

A small — but perfectly formed — previews section

A smaller than usual alphas section this month (space having been given to the finished versions of *Ridge Racer* on page 42 and *Virtua Fighter* on page 55). Following the Las Vegas CES (Consumer Electronics Show), **NEXT Generation** plans to provide a more comprehensive guide to the games currently in development next month.

70 Toh Shin Den **PLAYSTATION**

A final look at the PlayStation fighter that looks set to be Sony's answer to *VF*.

74 Dark Forces **PC**

LucasArts takes to the first-person perspective for a *Doom*-esque blaster

76 Boxer's Road **PLAYSTATION**

Can a boxing game ever *really* work? Maybe 32bit technology is the answer...

78 Hudson Soft

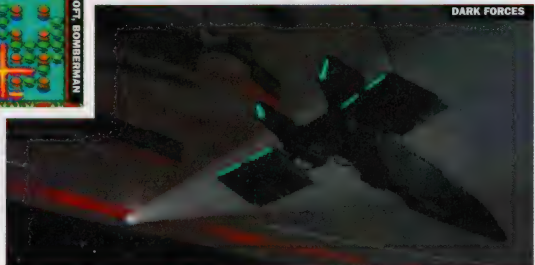
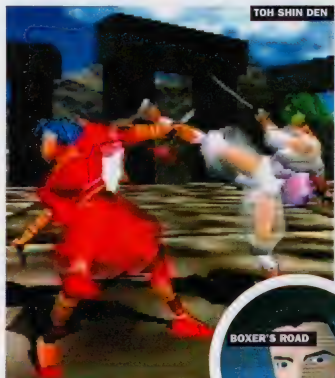
Ten-player *Bomberman*! Find out about the ultimate multiplayer game from Japan

82 Iron Assault **PC**

Take the *Doom* formula, add robot warriors and aim for deeper gameplay. The result?

84 Motor Toon **PLAYSTATION**

Another PlayStation game that's 99% complete — time for one final preview



ng alphas

Toh Shin Den



A pyrotechnical special move (top) sends the recipient flying (above)



Effects like these have previously been the sole preserve of high-end graphics packages, yet the PlayStation handles them with speed on the fly

It's impossible to overestimate the popularity of *Virtua Fighter* in Japan. It's more than just a game; it's a fully fledged phenomenon. So widespread and fanatical is its following among Nipponese gameheads that weeks prior to the launch of Sega's machine, Saturns running the game dominated storefronts in Akihabara, Tokyo's 'videogame district,' with eager gamers queuing up to play for free.

It comes as little surprise, then, given this huge ready-made audience for 3D beat 'em ups, that Takara should subtly choose this style of game for its initial PlayStation project.

However, *Toh Shin Den* is far from being a cynical copy of the popular Sega fighting game. In the same way as *Samurai Shodown* gave *Street Fighter II*'s gameplay a shot in the arm, so *Toh Shin Den* gives the creators of *Virtua Fighter* something to truly and deeply contemplate.

Saturn's *Virtua Fighter* isn't the only fighter up in town. Prospective PlayStation owners now have their own contender for the 32bit crown

Format: **PlayStation**

Publisher: **Takara**

Developer: **In-house**

Release date: **Available now**

Size: **1 CD-ROM**

Origin: **Japan**

For a start, *Toh Shin Den* isn't just a straightforward fist-fest: the combat features weapons, both edged and otherwise. These don't replace traditional punches and kicks, though—instead, the intention is to offer a game style that allows players to build fighting skills based on a combination of both attack styles.

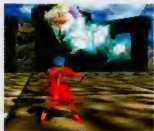
While *Virtua Fighter*'s array of taggable hits and spectacular slams is impressive in its own right, it's easy to see why some gamers — weaned on a strict diet of flash kicks and fireballs — didn't warm up to the game as quickly as Sega had planned and hoped. So,



Toh Shin Den backgrounds are gorgeous, but even more impressive is the PlayStation's use of transparent textures (Ellis's outfit, above)



Unlike *Virtua Fighter*, *Toshinden* allows players to dodge sideways, as shown by Ellis' cartwheel (above and top right)



Here, both contestants have chosen to fight as Ellis. Player two lets fly with a series of blows straight roundhouse (top). The same move reversed (2nd). A knife slash (3rd). A rising spin special attack (bottom)

doubtlessly with this in mind, Takara has primed each character with a choice selection of supernatural moves.

The company has also explored the potential of a 3D fighting environment more fully than Sega. Whereas the gameplay in *Virtua Fighter* operates in a single plane, the characters in *Toh Shin Den* are able to move relatively freely around the game's square combat area — in other words, they move 'into' and 'out of' the screen as well as from one side to the other. Whether cartwheeling out of trouble or buzzing around an opponent's head after performing a move which turns them into a fizzing ball, these fighters fully exploit the scope of their setting.

Takara claims that both standard and special attacks will be quick and simple to unleash, thanks to the PlayStation's four shoulder buttons. However, the more complex character designs make the fighting action appear slightly more confusing than it is in *Virtua Fighter*, with its cleaner lines and purer colors.



Blows don't connect any more solidly than this (top left). One of the few indoor stages (middle). The 'camera' zooms out (above)

But it is *Toh Shin Den*'s graphics that will surely generate most excitement — at least initially — amongst a gaming community hungry for tangible evidence of the Sony PlayStation's performance. Forget plain, unshaded polygons and start getting used to Gouraud-shaded, texture-mapped everything.

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From the fully modeled backdrops — including a formal Japanese garden and a rooftop scene at night — to the obvious effort that has gone into making individual limbs look solid, the game rarely fails to draw wheezes of amazement from onlookers.

Even apparently superfluous details like the celebratory antics of the victors of each bout reek of imagination and flair. For example, when Mondo casts his opponent from his raised ring, he spins his spear around and over his head, then brings it to rest across his shoulders, draping one arm over it as he

bellows a scornful laugh. Another honorable mention goes to the transparent togs sported by Ellis.

The truly remarkable thing is that convincing effects like these have previously been the sole preserve of high-end dedicated rendering packages, yet the PlayStation handles them with speed on the fly. The game now shifts 90,000 polygons per second, and moves even faster than *Virtua Fighter*. However, *Toh Shin Den's* animation does lack some of the finesse of Sega's flagship game — it's simply not as fluid or realistic. And *Toh Shin Den's* sound effects and music are also outshined by those in the Sega title.

If Takara's own small development team can clean up both these elements before release, then those who held out for the PlayStation rather than plumping for the Saturn and are now chomping at the bit for their own *Virtua Fighter* may find their commitment amply rewarded.

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The game's ever-changing viewpoint creates some spectacular situations (top left). Those familiar with *VF* will find that *Toh Shin Den's* prebout camera zooms are very similar (top right). Note the accurate shadows (above right)

The fighters

Toh Shin Den features eight fighters, plus a nonselectable end-of-game boss. Japanese fans like to know background details of game characters, which is why Takara has supplied potted biographies for each.

Kayin A Japanese-Scottish warrior with a large sword.

Run-go An American who wields a metal rod — apparently the strongest weapon in the game.

Eiji From Fukuoka, Japan, this chap brandishes a heavy Japanese sword.

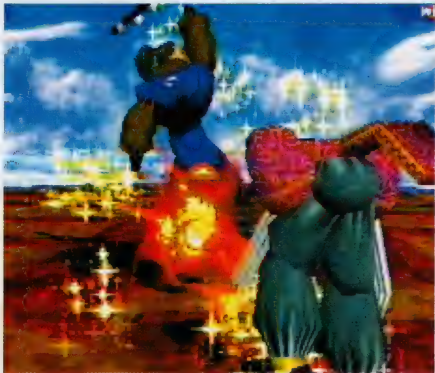
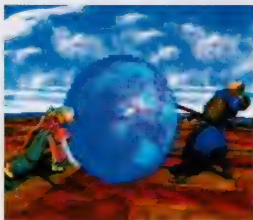
Fo A mysterious wizard with vicious metal sabers attached to each arm.

Mondo Uses a spear with interchangeable heads.

Sofia An ex-KGB agent with the fastest weapon in the game — a whip.

Duke This Frenchman hefts a magically extendible two-handed sword.

Ellis A circus dancer who uses two simple knives.



As well as using this blue bubble (top) against opponents, Fo can actually climb aboard it. Kayin demonstrates a drilling sword thrust (middle). Even creases in clothing are accurately detailed (above)



Same-character fights, like Ellis vs Ellis (middle), are an established beat 'em up feature. The leather-clad Sofia discards her weapon (a KGB-issued whip) in favor of a traditional hands-on approach (above)

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Dark Forces

Is LucasArts' new game simply '*Doom* meets *Star Wars*,' or does it offer a new hope for the 3D blasting genre?

Format:	PC
Publisher:	LucasArts
Developer:	In-house
Release date:	TBA
Size:	1 CD-ROM
Origin:	US



Dark Forces has probably the best texture-mapped 3D environment yet on the PC. The detail remains convincing even when you're in an up-close perspective



There can't be many more bankable names than George Lucas' *Star Wars* brand. The success of the 1977 movie paved the way for two sequels (so far), a bewildering range of toys and tie-in merchandising, and several videogames. *Dark Forces* is the latest game inspired by the sacred cow of '70s science fiction, and with it the LucasArts empire is out to conquer the *Doom*-inspired 3D fighter genre.

The character you play in *Dark Forces* is a former Imperial Navy operative who now works as a mercenary for the Rebel Alliance, infiltrating bases, stealing information and performing other sensitive tasks. The plots of the missions run alongside the existing *Star Wars* stories and occasionally touch on the characters and action from the movies — favorites such as Darth Vader and Jabba The Hutt both make cameo appearances. Scenes at the end of each mission

update the story and show how you've affected the course of the rebellion.

Dark Forces' texture-mapped graphics drip with details from the *Star Wars* universe, and they help give the game real atmosphere. The Death Star level is the best example of this. Not only does it have the correct architecture and accurate floor plans, but it's filled with storm troopers, Imperial officers and guards. Even the tiny 'dog' robot that Chewbacca scares away in *Star Wars* appears.

Beneath the attractive graphics is a superior game engine — it's more detailed than other 3D first-person-perspective games, and it offers a full

***Dark Forces'*
beautiful
texture-
mapped
graphics drip
with details
from the
Star Wars
universe**



There are 10 different weapons available in *Dark Forces*. 1 The humble 1976 goalie gloves. 2,3 After a while, you can move on to more powerful blasters. 4 This is the *Dark Forces* equivalent of *Doom*'s minigun. 5 The four-barreled gun is impressive. 6,7 But the heavy mortar and the laser cannon are truly formidable. 8 The most powerful weapon is a top-secret Imperial research project. You find the plans early on and collect parts on later missions

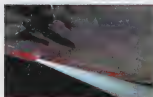
3D environment. This means that rooms are stacked on top of rooms, and consequently the levels are structured like actual buildings, unlike those in *Doom* and *Doom II*.

It's also possible to look up and down to case levels and spot switches. And even at the highest detail setting on a relatively fast PC (486 DX2/66), it's a very speedy game, making it easy to tear around corners straight into a posse of Imperial stormtroopers.

There are plenty of weapons to play with, including land mines, thermal detonators, a mortar and various blasters. There's no lightsaber, however, because big George is quite precious about it. Apparently, only a Jedi is able to use the weapon and therefore Luke is the only rebel who can pack one.

More significantly, the gameplay is less about blasting and more about tactical exploration. In most missions you have to either find something, kill someone or blow something up, and it's often better to run away from a fight than go charging in with all guns blazing. Your character can collect more than just guns — various other objects are used in puzzles within levels, making *Dark Forces* a much more thoughtful game than *Doom*. In all, LucasArts is hoping to have 50 missions for you to work your way through, and claims that the game is around twice as big as *Doom II*.

LucasArts, like its founder George Lucas, has less of a reputation for originality than for well-crafted reinvention. The company has, in the past, set new standards for graphic adventures and space sims with titles like *Sam And Max And X-Wing*, and *Dark Forces* looks set to repeat the success of those games.



The cut-scenes of *TIE Fighter* and *X-Wing* have been replaced in *Dark Forces* by rendered sequences (above)



In the *Jabba's Revenge* mission you wake up in a monster pit with no weapons. To escape, you have to crawl through a network of tunnels

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Boxer's Road



It's best to throw in the towel if you're hitting the canvas too often or you'll start to take permanent, career-ending damage

Format: **PlayStation**

Publisher: **New**

Developer: **In-house**

Release date: **February**

Size: **1 CD-ROM**

Origin: **Japan**

Boxing games have historically been a bunch of light weights with glass chins and little staying power. *Boxer's Road*, however,

looks much sturdier than its predecessors, with impressive polygon fighters that you can watch brawling from a range of different perspectives.

There's a great emphasis on training — even before you start, you have to take tests to go professional. When training for a fight you tailor

After years of being sidelined by flashier beat 'em ups, the boxing sim could be about to make a comeback



Intimidating defensive stances and powerful attack sequences work together with the realistic background graphics to create a surprisingly absorbing atmosphere (above). And, close up, the boxers look amazingly unblemished (above left)



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Boxer's Road's first-person viewpoint provides real in-your-face action



Watch ringside action from the stands (above) or zoom in for close-up boxing action (inset)

your regimen to your opponent's strengths and weaknesses, working on certain punches and learning to avoid his favored strokes. You even get to choose your boxer's diet.

The effectiveness of each of the many different punches depends on several variables. These include the accuracy of the punch, how well — if at all — it's blocked, and whether the boxers are moving. Knockdowns cause more damage if certain punches are used, but as a general rule it's best to throw in the towel if you're hitting the canvas too often or you'll start to take permanent, career-ending damage.

Boxer's Road is the most original boxing game since the pioneering polygon-based *4D Sports Boxing*, released for the PC in 1990. And Saturn owners can look forward to a similar game from JVC.

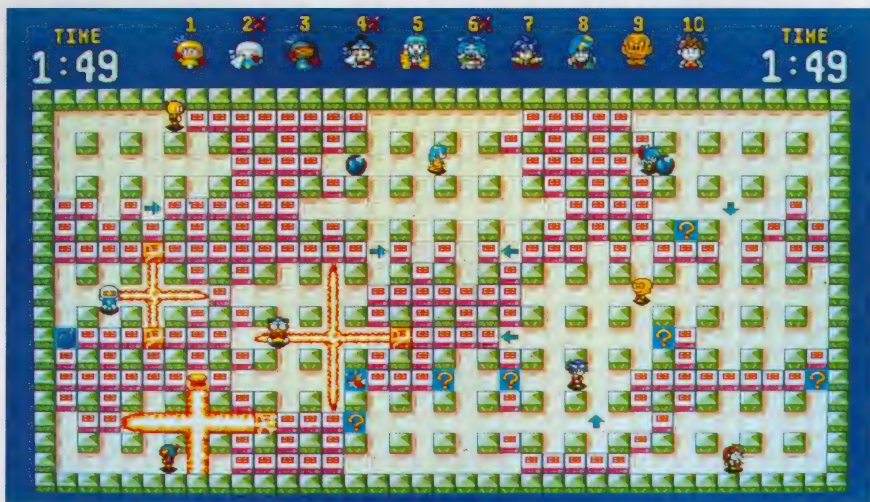


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Hudson Soft



Hudson Soft is not your average Japanese videogame outfit. This is a company with overseas interests as diverse as television

and movie production and coin-op museums. Recently, it has even been involved in raising AIDS awareness among young people.

After establishing itself with

programming languages and utility software in the early '80s, Hudson began to focus upon what was to become its true vocation: games. Its original titles and conversion work from

The creators of *Bomberman*, the best multiplayer game of all time, invited **NEXT Generation** to visit its Japanese HQ in the northern city of Sapporo

1984 onward rapidly gained it recognition as an industry leader, and its PC Engine conversion of Irem's arcade smash *R-Type* is still regarded as the system's definitive contribution to the shoot 'em up genre.

Hudson's hardware achievements are as formidable as its software successes. In 1987, in collaboration with Japanese giant NEC, it produced the PC Engine, arguably the first machine to deliver affordable arcade-quality gaming to the home. Only a year later it pioneered CD-ROM storage in the form of NEC's PC Engine add-on, the CD-ROM².



Hudson Soft's research and design center in Sapporo is the company's Japanese HQ



Hi-Ten Bomberman (top), arguably the best multiplayer game in the world, runs on a high-definition Television. Its creator, Katsuhiro Nozawa makes his point (left)

Although it enjoyed only minor success in the US, the PC Engine gained a huge following in its native land, where a combined Engine and CD-ROM unit, the PCE Duo-RX (the machine's fifth incarnation), was recently launched.

Hudson is, of course, best known for its *Bomberman* series. The original game of bomb detonation — clumsily entitled *The Bomberman* — was written in 1980 purely as an exercise to demonstrate the power of Hudson's own

"I personally believe that the Famicom version of *Bomberman* is the one and only version of the game"

Nakamoto Shinichi, Hudson Soft

BASIC compiler. It eventually enjoyed a small-scale release in Japan as a one-player PC game, with just one type of bomb and one enemy.

It wasn't until the arrival of Nintendo's Famicom (NES) system that the concept was revived. Struggling for inspiration after cartridge hits such as *Lode Runner* and *Star Force*, Hudson Soft plundered its back catalog and happened across the game that would prove to be its crowning glory.

After seeing power-up systems in popular shoot 'em ups of the day, the



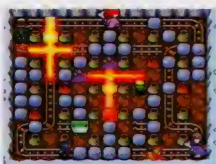
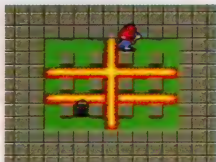
SFC *Super Bomberman 3*, demonstrated by head designer Tatsumitsu Watanabe

game's designers incorporated a similar concept into *Bomberman* — bombs could be increased in strength by collecting icons. What a simple concept! One that, of course, made *Bomberman* a classic lesson in competitive gameplay.

But it was still only a two-player game. NEC's technology was to change that. "We were really lucky that the PC Engine had a multitap," reveals Nakamoto Shinichi, Hudson Soft's director of R&D. "Without it, the PC Engine version would have been merely a reproduction, and would probably have been forgotten."

The development of multitap hardware was arguably the single most important factor in *Bomberman*'s success. Multitap made the game a true party experience, one that managed to induce more competitive energy in its participants than probably any other game before.

And *Bomberman* is still going strong. Hudson's most ambitious game to date is *Hi-Ten Bomberman*. But you won't see it turning up in the home. The game will only run on Hudson's in-house hardware — a combination of custom PC and stripped-down PC Engine technology. It is aimed specifically at the exhibition/show market, and its unprecedented 10-player capacity has already proved a



The latest version of Hudson's explosive classic is *Super Bomberman 3* for the Super Famicom

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NEXT Generation tested the PC-FX with the help of designers Koji Arai and Kazunori Yasui

big draw on recent tours in Japan. The size of the playing area and the number of players means it has to use HDTV technology — the first game to do so.

And it certainly is an experience. It's a simple equation: Multiply the fun of standard *Bomberman* by two and you arrive at the entertainment provided by *Hi-Ten*. It excels as a demonstration of both cutting-edge display technology and lovingly crafted gameplay.

Although the system has only enjoyed floor space at Japanese events, it may not be long before British audiences get a taste of the action. Hudson has firm intentions to bring *Hi-Ten* to these shores, although dates and venues have yet to be agreed.

Despite the hi-tech adventure of *Hi-Ten Bomberman*, Hudson is still committed to the established game platforms. Hence *Super Bomberman 3*, nearing completion for the SFC (SNES).

This is the first game in the SNES series to allow five players to take part — the fifth player starts in the center of the playing area. With more collectibles and extra level details, including mine carts and even creatures to ride on, the game promises to offer more variety than previous *Bomberman* outings, if nothing else.

The second game in the series, released only recently in the UK, met with a fairly lukewarm reception among die-hard fans of the original. The main criticism levelled at it was that the gameplay had been tinkered with just a tad too much — familiar features had been thrown out and replaced with new, but not necessarily better, ideas. And *Super Bomberman 3* has been tinkered



Battle Heat is now out for the PC-FX. All the moves are prestored in anime form and played back, *Dragon's Lair*-style. CD access is very fast

with even further. Whether it will actually appease or further annoy its fans will no doubt become clear on its release in April '95.

Despite the multiplayer game's following, the anticipation surrounding the third SNES incarnation, and the HDTV *Hi-Ten* system, Nakamoto Shinichi still hankers after the old days. "I personally believe that the



NEC's unusual PC-FX games console was released on December 9 in Japan. Three games shipped at the same time



Although primarily a game machine, the PC-FX can also receive faxes and hook up to NEC's PC98 computers

Famicom (NES) version of *Bomberman* is the one and only version of the game," he candidly admits.

Hudson's link with NEC, which began with the PC Engine, has continued to flourish, and has just blossomed in the form of a new machine, the PC-FX, which is aimed at

The PC-FX is aimed at recapturing NEC's former prominent position in the Japanese videogame industry

recapturing NEC's former, and more prominent, position in the competitive Japanese videogame industry.

Games like *Bomberman* won't be appearing on the PC-FX, though, because of NEC directives on software development. Apparently, the company's intention is to concentrate solely on software which is based on popular various anime series, so although it is claimed that the system is able to handle both sprite and polygon-based titles, the range of software will be heavily biased toward pregenerated animated footage. This marketing strategy is perfectly illustrated by *Battle Heat*, a *Fist Of The North Star*-inspired fighting game which is scheduled for release at the same time as the machine. *Battle Heat* only conforms to the established beat 'em up formula at the beginning, in as much as each player gets to choose their fighter from a selection of eight. From then on, the action is turn-based. When a player has gained the initiative, he or she is free to unleash an attack from their character's repertoire of moves — rather like a traditional Japanese roleplaying game. The resulting animation — be it a successful hit, block or whatever — is immediately kicked in from CD, after which the recipient is able to return in kind.

The game's theme, plot and characters were all designed by members of Hudson Soft's in-house team and then relayed to an external

animation studio where the anime footage was created. This is fantastical action-crazed stuff featuring typical Japanese camera angles, furious speed lines and dramatic pans.

The other project from Hudson Soft's PC-FX development arm is *Team Innocent*. Although it too comes armed with a gazillion megabytes' worth of prerendered stills as well as footage, it also features traditional

sprites, blending the two to create a space adventure with a very unusual and distinctive flavor.

With backgrounds rendered using Alias software on Silicon Graphics machines, *Team Innocent* is similar in style to Infogrames' *Alone In The Dark* series. The PC-FX holds several views of each location in RAM and flips between them as the player moves around. Certainly the most impressive aspect of the title, though, is its



Hudson's *Team Innocent* for the PC-FX is a bizarre adventure mixing anime and prerendered video and stills. The video quality is superb

stunning, full-screen digital playback drive, courtesy of Hudson Soft's own specially customized hardware.

But, perhaps wisely, Hudson is not depending entirely on the PC-FX for its future. With various projects for the newly released PlayStation and Saturn and for the 3DO currently in development, it looks as if the company will also have a strong presence in the next-generation mainstream.



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Iron

Assault

Format: PC

Publisher: Virgin

Developer: Graffiti

Release date: Mid-March

Size: 1 CD-ROM

Origin: Italy

With the PC game market becoming increasingly cluttered by *Wolfenstein*/*Doom*-style titles, developers are being forced to look at new ways of improving either graphics technology or gameplay. Virgin's *Iron Assault* opts for the latter

Virgin looks set to continue the trend toward 3D PC games with a robotic action-strategy offering from Italy

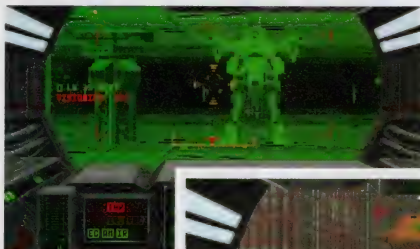
approach, with extra attention being paid to the plotting, in-game atmospheric techniques, and gameplay that becomes increasingly strategic as you progress. The aim is obviously to please the traditional gamer as well as the *Doom*-heads.

The storyline is typical futuristic fare. You play a member of a band of rebels fighting against a mighty corporation which is on the cusp of world domination. All combat is performed by huge robotic war machines over various Earth locations. There are offensive, defensive and recovery missions available, all of which involve a substantial amount of blasting and more than a little cat-and-mouse strategy.

Initially, the game works in a linear fashion, with a series of missions to put beginners through their paces. Success in each mission has an effect on the rebel cause, and may also result in the development of new weaponry or defense systems. After you've completed a few missions, you're rewarded with promotion. This inevitably leads to harder tasks and extra responsibility,



All the visuals in *Iron Assault* started life as physical models before being digitized



Night sights are handy for indoor work — enemy robots have a habit of taking potshots from the shadows



Torching an enemy robot in the heart of an industrial war zone. *Iron Assault*'s 3D engine uses flat floor mapping, just like the *Doom* games

One of the most intriguing aspects of the game is the use of stop-motion animation for the preshot scenes



A robot thuds across the plains. Every sprite animation in the game was produced by digitizing a model, then retouching the image to regain clarity



Judging by this scanner shot of an arctic wasteland, *Iron Assault* looks like a not-too distant cousin of *Battlezone*



A second cockpit view is available in all models of rebel robot, offering a smaller viewing window but more tactical screens on display at one time



The wide city streets begin to look just a little less spacious when mighty war robots are stomping along the roadways



The Lone Wolf rebel base (top) is a mixture of *DPaint* and a digitization of a specially built model. This rebel base interior (above) was created using the same method

with other rebel robot pilots to give orders to and, later, campaign screens to get involved in. These screens depict the various friendly, enemy and conflict areas, and all the supply routes between them. Here you're given freedom to get involved in any conflict, which means that wider-ranging strategies can be formed. The ultimate promotion is to the rank of general, at which point you have to completely purge four whole continents of the enemy forces.

The 3D engine itself doesn't impress one as much as *Doom*'s, but it does have one feature which *Id*'s offering lacks: form light-sourcing. As Graffiti's Antonio Farina explains, "When missiles are fired down city streets, the walls of skyscrapers actually glow as the projectile passes by, with one final flare lighting the scene as the missile hits home."

It's a simple trick but an effective one. "Another thing players will appreciate," continues Antonio, "is the way everything in the game world can be damaged, whether it's a section of building, a (streetlight) which can be trampled under the feet of a robot, or even another rebel vehicle."

One of the most intriguing aspects of the game is the use of stop-motion animation for preshot scenes, rather than the traditional Silicon Graphics or

3D Studio method. Antonio again:

"The guy who handled all the in-game graphics and movie sequences joined Graffiti after working in the film industry, bringing model-making, blue screening and stop-motion skills to the title." The results can be seen in the way the sprites are convincingly animated, as well as in the Terminator-style intro sequence and assorted in-game minicam shots.

After 18 months in development, *Iron Assault* is set for release later this year. It will be interesting to see how its reliance on depth of gameplay rather than intuitive blasting goes down with *Doom* fans.



Backdrop objects and sprites become pixelated in close-up. When in motion, the enemy robots convey a real sense of weight

ng alphas

Motor Toon Grand Prix

Sony's eccentric PlayStation racer is wildly different from *Ridge Racer* but could prove to be an equally jaw-dropping achievement



Format: **PlayStation**

Publisher: **Sony Computer Entertainment**

Developer: **Poly's/
Bandit Inc**

Release date: **Mid-Dec (Japan)**

Size: **1 CD-ROM**

Origin: **Japan**



One of the plethora of views (top). Off-roading (above right). Selecting a car (above)



Sony's professionalism is evident throughout *Motor Toon Grand Prix* — this is no static screen

Nintendo's well-received SNES game *Stunt Race FX* was the first racing game to feature vehicles with obvious personalities. The bug-eyed cartoon cars and trucks created by producer Shigeru Miyamoto were an endearing testament to the Japanese penchant for cuteness. Crude though the polygon vehicles were, they came alive when in motion and acquired a character all of their own.

Motor Toon GP, Sony's first major in-house PlayStation game (a third party developer, Bandit, has joined



Speeding down a hill (above). In-car view (above right). Note the colorful backdrop of hot-air balloons. Negotiating a winding bridge section (right)

The cars shrug and rock with a bizarre elasticity, morphing and mutating in a fashion that would bring a tear to the eye of Uncle Walt himself

Sony Computer Entertainment for the project) treads the same tracks as *Stunt Race FX*, using the PlayStation's powerful texture-mapping abilities to render a set of warping, twisting vehicles that owe more to Roger Rabbit than *Virtua Racing*. And it does it all in realtime with astonishing ease.

Gone are the Susumu Matsushita cameo characters seen in **NEXT Generation's** previous look at the game (NG 1). Instead, the cars themselves are left to do all the talking. The plain Gouraud-shaded polygons that made up the vehicles earlier in development have now been enhanced with texture-



The game occasionally encourages you to stray from the beaten track



At times, the game's Roger Rabbit-style vehicles transmogrify into fully animated cartoon characters. Bizarre

mapped surface details like eyes and other anthropomorphic features.

In a further effort to capture the cartoon feel, the cars' behavior has also been altered. As they amble around the game's 12 different tracks, they shrug and rock with a bizarre elasticity, morphing and mutating in a fashion that would even bring a tear to the eye of Uncle Walt himself.

But it's the game's playability that was expected to be its greatest strength. Ironically, this is where things appear to have gone slightly awry. Compared to the overplayed handling characteristics of the *Stunt Race FX* cars, the vehicles in *Motor Toon Grand Prix* are rather reserved. Drift turns

ng alphas

Just as Ridge Racer is in a class of its own in the serious racer genre, Motor Toon GP's outlandish visuals give it the chance to carve a unique niche for itself



The two-player tracks are strewn with obstacles (above). Various views are selectable here too (left)

and powerslides fall by the wayside to be replaced with a much stricter tarmac-hugging experience.

It seems that *Motor Toon's* gameplay will adhere to the promises made by project director Kazunori Yamauchi, who said he wanted the handling of the cars to be as realistic as possible. Certainly a fine intention, but one that could sit uncomfortably with the unrealistic nature of the cars.

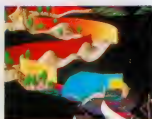
People will also be disappointed by the lack of the promised link-up option. They'll have to wait a while longer — possibly until Namco's proposed *Ridge Racer 2* — before being able to share a racing experience via the

PlayStation's link-up facility. In the meantime, *Motor Toon GP* offers a split-screen mode and a new selection of tracks specifically designed for multiplayer action. The scenery has been simplified to maintain the game's ludicrously smooth screen update, but there are many more on-track obstacles than in the relatively free runs of the one-player circuits.

Unlike the cars, the playing setting remains mostly unchanged and is as breathtaking as ever. The undulating landscapes are convincing and there's a fair sprinkling of texture-mapped roadside objects. The spectacular use of color, in particular, breaks new ground, shown with smooth graduations of hue giving the game an appropriately surreal, plasticity look.

The sound is well-orchestrated. The music, which plays from the PlayStation rather than from CD, is cutesy but catchy, and the sound effects are superb — driving through a flock of sheep, for example, is accompanied by a cacophony of fittingly worried cries.

Just as Namco's *Ridge Racer* is in a class of its own in the serious racer genre, *Motor Toon GP's* outlandish visuals give it the chance to carve a unique niche for itself. Whether the title will work as a racing game is yet to be determined.



Sections of the *Motor Toon* world in SGI-rendered form. Plasticlake (middle) allows the player to shoot down tubes



Motor Toon includes five different *Virtua Racing*-style perspectives (including a rear-facing view) which you can switch between smoothly and easily. Even more may be made available via a cheat

ng

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CD-i



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Super Street Fighter II Turbo 3DO **Zool 2** Jaguar **Motocross Championship** 32X **PegLeg** Mac **Cyberia**
PC **Cadillacs & Dinosaurs** Sega CD **Ristar** Genesis **Jurassic Park II** SNES **Mazinger Z** Arcade



Your essential reviews guide to this month's game releases...

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94	Sega CD
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finals is **NEXT Generation's** monthly review of all significant gaming titles released on all formats. Games are played extensively by one or more of our highly-experienced reviewers, and then rated. For further information on any or all of the titles covered in the following pages, we suggest reading the more in-depth reviews found in *Game Players* Sega Nintendo, *PC Gamer* and *CD-ROM Today*. Here's what the ratings signify...

★★★★★ Revolutionary
 Brilliantly conceived and flawlessly executed; a new high-water mark.

★★★★ Excellent
 A high-quality and inventive new game. Either a step forward for an existing genre, or a successful attempt at creating a new one.

★★★ Good
 A solid and competitive example of an established game style.

★★ Average
 Perhaps competent; certainly uninspired.

★ Bad
 Crucially flawed in design or application.

3DO

Cowboy Casino Interactive Poker

Publisher: IntellPlay
Developer: IntellPlay
Size: 1 CD-ROM
Release Date: Available now

Cowboy Casino Interactive Poker is intended as both an entertainment and an educational tool. You face off against five Old West card sharks: a gambler, a gunfighter, and so on, and as you play, info boxes supposedly help you learn to be a better card player. Unfortunately, the game is painfully slow, and while the 'Win at Poker' manual will tell you what to do next, it never bothers to tell you 'why.' (An actual book, *The Basics of Winning Poker* by J. Edward Allen, is included, but you could pick that up by itself and spend less.) In other words, you don't learn much, or even enjoy playing the hands.

Rating: ★

Family Feud

Publisher: GameTek
Developer: Eurocom Interactive
Size: 1 CD-ROM
Release Date: Available now

Family Feud gives you a choice of five families — each of a different



Fans of the original *Family Feud* can now play the TV show at home

ethnic makeup, naturally. It's extremely faithful to the show. Like most other GameTek game show titles, you enter your answer by moving the cursor around and choosing letters to spell the words, which is cumbersome, but the game is good about recognizing minor misspellings and alternate

answers. It's a blast if you have a bunch of folks with whom to play, however, in the final analysis, whether or not you like it probably depends on whether or not you like the television show.
Rating: ★★★

Ghost Hunter

Publisher: Matushita
Developer: Humming Bird Soft
Size: 1 CD-ROM
Release Date: Available now (Japan)

Ghost Hunter is a good-sized graphic adventure in which ghost hunters, a detective, a scientist, a mystic, and a journalist take on an entire haunted house. Traveling around the house isn't as smooth as it could be because the controls tend to stick —



Japanese text and a bizarre story line make *Ghost Hunter* an impenetrable 3DO game

compare it to *Mansion of Hidden Souls* and you'll understand. But it has lots of good atmosphere, it's kind of gross, and nicely done overall. However, it's important to mention that, being from Japan, it's entirely in Japanese. If you don't understand the language, you won't get very far, but if you even understand a little, it's definitely worth it.

Rating: ★★★

Lemmings

Publisher: Psygnosis
Developer: DMA Design
Size: 1 CD-ROM
Release Date: Available now

Here they are — those little furry mammals, too dumb

to stop moving in a straight line. *Lemmings* has ambled its way across nearly every gaming system available in the last five years, including Game Boy. The 3DO version doesn't add anything new, but it controls very well. "How much is that doggie in the window?" is guaranteed to stay stuck in your head for days, and hearing those little guys wail, scream, and holler "Let's go!" through 120 levels of increasing madness is a treat.

If you've played any version, you've played this one, too, but if you haven't tried it, this is one of the better ones, and it's still one game that's addictive as hell.

Rating: ★★★★★

Off-World Interceptor

Publisher: Crystal Dynamics
Developer: Crystal Dynamics
Size: 1 CD-ROM
Release Date: Available now

You're a bounty hunter in a futuristic 4x4, rolling across six hostile planets, blasting bad guys. It's a little more fast and furious than usual, and addictive in a mindless way, but nothing you haven't seen before.

What's new is the intro sequences all have "Mystery Science Theatre"-style silhouettes of two guys heckling the video. Whether this was planned or just a last-minute fix for a cheap-looking, badly acted intro isn't clear, but it's funny. It doesn't affect the action, but it perks up the overall game a lot.

Rating: ★★★



Two guys make jokes about how bad the video footage is (no, really) in *Off-World Interceptor*

3DO

POWERFUL

Super Street Fighter II Turbo

Publisher: Panasonic
Developer: Capcom/Panasonic
Size: 1 CD-ROM
Release Date: Available now

OK, we know this whole *Street Fighter* thing is starting to run out of steam. But it's still the best, and this 3DO conversion is, without a doubt, the best version to hit home systems.

The game includes all 16 *Street Fighter* characters, including the four 'new' World Warriors: Cammy, Dee Jay, T. Hawk, and Fei Long. It also includes the 'Super' move mechanics (i.e., — beat somebody bad enough for long enough and you get to use a move that hurts them *really* bad). It's colorful, fast, and so impressive you hardly notice the disk access time between rounds.

There is one sour note: the 3DO controller is not really built to handle the speed and precision required to fire off classic *SFII* moves. There's an optional 3DO-compatible six-button controller available, and it's better, but still not great.

Then again, you can't fault the game, it absolutely kicks.

Rating: ★★★★★

Here they are, all 16 World Warriors you've come to know and love, done up nice and pretty in arcade quality and color (right)



This is simply the best *Street Fighter* conversion available for a home system, bar none. If it can't get you moving, you've been dead too long (left). It even includes the Super Move system — *Street Fighter*'s answer to every other fighting game's finishing moves. Explosive and eye-popping (above)

Rebel Assault

Publisher: LucasArts
Developer: LucasArts
Size: 1 CD-ROM
Release Date: Available now

This is a very close conversion of the PC CD-ROM game, and we have to admit, parts of it are very impressive. The clips from the *Star Wars* movies, the music, and the 3D rendered graphics are all

great — however, they all function as little more than window dressing for a not-so-hot, shooter-style game. The game is none too solid, and game play is rudimentary. Nonetheless, the PC version sold like hotcakes, and it seems to have started a mild trend in 'multimedia' games that are more media than game. Be afraid, be very afraid of more games like this.

Rating: ★★



Rebel Assault is a good example of bells and whistles overwhelming its thinly cloaked gameplay. Once you get through to the gameplay, it's not all that fun

Samurai Shodown

Publisher: Crystal Dynamics
Developer: Crystal Dynamics/SNK
Size: 1 CD-ROM
Release Date: Available now

Shodown is a cult hit — its following isn't as large *Street Fighter* or *Mortal Kombat*, but those who like it don't play much else. The hook: Each character uses a blade of some sort, and the special moves are a hoot — other fighters throw fireballs, but characters like Tam Tam throw out huge, happy-faced comets! The 3DO conversion is nearly identical to the arcade version, much more faithful than the previous SNES, Genesis, and Sega CD versions. The load time between rounds is noticeable, but acceptable. Overall, a decent enough fighting game, done well.

Rating: ★★★

Shanghai: the Great Wall

Publisher: Activision
Developer: Activision
Size: 1 CD-ROM
Release Date: Available now

This title game from the East has kicked around on gaming systems ever since the 8bit days.

Basically, it's a form of Chinese solitaire, where you match up tiles with identical ones along the edges of the stack, then remove them to reveal more tiles. This 3DO version adds pretty backgrounds and soothing music, and also gives you the option of changing the tile set from the traditional Chinese characters to more modern variations, including among others, Zodiac symbols.

It's very solitary, but incredibly absorbing, and if you've tried it, you are most likely already one hooked gamer.

Rating: ★★★★★

Station Invasion

Publisher: Club 3DO
Developer: 3DO
Size: 1 CD-ROM
Release Date: Available now

Kids are in charge of one of five shows (with names like "What's That Smell?," "I'm Grounded") all enabling them to solve puzzles to gain 'ratings points.' This is *Twisted* for the young, and like that game, it's well produced and fun, but the video is limited and after a few games, you've seen just about everything.

However, the simple puzzles (pick out the noun, which animal is a mammal) peg this as

rating 32X jaguar

32X



FINISHED?

Motocross Championship

Publisher: Sega
Developer: Sega
Size: 16 MBs
Date: Available now

Once again, the 32X attempts to flex its muscles and merely shows its fat. In *Motocross Championship*, the texture-mapped backgrounds, scaling bikes, and sharp tracks pulse like Popeye's biceps, but the pixelly (circa 1979) bikes and dull tracks seem to



hang over the belt of the new system. Compared to Genesis or SNES bike racing games, *Motocross Championship* is

right there among the top: You can race in Beginner, Novice, Amateur, or Pro levels for all three classes of bikes (125 cc, 250 cc, 500 cc), compete for an entire season on 12 different tracks, with 20 competitors to gear up against. The tracks include monster jumps (double and triple), high berms to mow in to, and plenty of arm-pounding bumps and mounds.

All this makes *MX Championship* the best 16bit motorcycle game around, but comparing it to other 32bit games like the 3DO version of *Road Rash* is like comparing a Schwinn to a Harley-Davidson. And *Motocross Championship* is most definitely the Schwinn.

Rating: ★★★

High-flying action is what *Motocross* is all about. *MX Championship* does a good job capturing some of that excitement (left). 32bit texture-mapped tracks with a 16bit pixelly racer put on top. Best of both worlds (circle)? Two-player mode adds excitement and cuts way down on visibility (below)



intended for the very young, a group with a very high boredom threshold. If you're under eight, it's a scream.
Rating: ★★★

Supreme Warrior

Publisher: Digital Pictures
Developer: Digital Pictures
Size: 2 CD's
Release Date: Available now

Digital Pictures' games are usually better to watch than play



If the moves you made were more of a response to your opponent — and if the control was consistent — *Supreme Warrior* might have been good. As it is, it's just fair

— this was filmed at Shaw Brothers' studios in Hong Kong — however, with this title it may be on the edge of a viable game structure. This is a first-person fighting game in which you square off against 12 supernatural opponents. By watching them carefully, you're supposed to judge which blow to use as they move in. It's not a bad idea, but the learning curve is steep, and the proper move is rarely clear or consistent with what's on screen.

Still, it's a definite step up from Digital Pictures' previous attempts to integrate video and games. Keep at it.

Rating: ★★

World Cup Golf: Hyatt Dorado Beach

Publisher: US Gold
Developer: ARC Developments
Size: 1 CD-ROM
Release Date: Available now

This takes place on the famed Puerto Rican Dorado Beach golf course. The game mirrors the



Golf pros might appreciate all the info and options, but simple gamers will find it cumbersome and frustrating to play

actual tournament very closely, as two-person teams compete over 72 holes for the World Championship. Unfortunately, the game mechanics are oriented toward a very technical player, and not always executed well (the terrain indicator for the lay of the green was especially anti-intuitive). This isn't necessarily a bad thing; if you're a golf fanatic, you'll no doubt appreciate all the information and options.

However, those people in search of a decent little golf title should probably look for a game that's a little less demanding.
Rating: ★★

Jaguar

Bubsy: Fractured Furry Tales

Publisher: Atari
Developer: Accolade
Size: 2 MBs
Release Date: Available now

Bubsy, that wacky, wise-crackin' bobcat (with an attitude) is now showing off his zany, off-the-wall antics on the Jaguar. Similar in



While Bubsy is chock full of screwball scenes and 'zany' antics, it won't win awards in innovation or originality categories

rating cd-i macintosh

play to just about every side-scrolling jumper ever made (apologies to *Mario*, *Sonic*, *Aero*, and *Ardy Lightfoot*), *Furry Tales* actually comes off looking good in Atari's True Color technology. Players will run, jump, and glide their way around 15 different levels of Fairytaleland (we didn't make that up) looking to repair damage that's tainted the fables of the world. Not a bad title, but platform fans will probably find *Zool 2* a little more entertaining and a lot more innovative.

Rating: ★★

Kasumi Ninja

Publisher: Atari
Developer: Atari
Size: 2 MBs
Release Date: Available now

Kasumi Ninja, Atari's first entry into the tumultuous fighting games arena, is a tragic example of what can happen when good ideas are poorly executed.

Despite creative approaches in both character design (fighters include an Amazon queen, a Goth king, and even a Scottish brawler), and selection (eight different fighters represented in a Stone-age hall of fame), the game's originality is spoiled by jerky animation (arm and leg motions work independently of body movements), sluggish control, and baffling play mechanics that discourage close-up fighting. *Kasumi Ninja* is an intriguing approach to the classic fighter but it just doesn't measure up.

Rating: ★

Val d'Iserre Skiing and Snowboarding

Publisher: Atari
Developer: Virtual Studios
Size: 2 MBs
Release Date: Available now

Jaguar shows off a little bit of muscle in the scaling and graphic quality of its newest sports sim *Val d'Iserre*. Basic features include 3 play modes in both skiing and



Val d'Iserre has a lot of fast paced action, but variety is scarce

snowboarding. 1 or 2 player competitions (not simultaneous though), a memory option that records your option settings, and 3 different courses (downhill, giant, and slalom). But even with all the extras, the game just doesn't have enough variation in play to give it long-term value. Skiing and snowboarding have a different look, but for the most part they play the same, as do the various courses. A fair game that won't stand the test of time.

Rating: ★★

Zool 2

Publisher: Atari
Developer: Gremilin
Size: 2 MBs
Release Date: Available now

Zool 2 is a better than average platform game originally released on the Amiga. Krool (the bad guy) invades the Nth dimension and it's up to Zool (the good guy), and his beautiful partner Zool (attractive in a very, very



A strange storyline and bizarre graphics give *Zool 2* its unique feel

frightening way), to stop him and his morphing henchman, Mental Block. Players can choose either one of the two starring intergalactic ninjas (trademarked, don't even think about it), Zool, with increased speed and jumping ability, or Zool, armed with whip.

Graphics are crisp and sharp, and even the fastest animation sequences are without jerks or slowdown. The numerous quantity of interesting power-up items and stages keep the play fresh and unique, and varying difficulty settings keep it challenging as well.

Zool 2 is still a basic platform game, but one of the best we've seen in a while.

Rating: ★★★

CD-i

No new CD-i games were made available for review this month.

Macintosh

CONDEMNED

SimTower

Publisher: Maxis
Developer: Maxis
Size: 2 Disks
Release Date: Available now

When you're responsible for generating a whole genre of games, it puts you under a lot of pressure to ever exceed your own high-water mark — and attempts to recock the same recipe often remain half-baked. Like *SimCity*, *SimTower* puts us in a situation that we're all very familiar with — creating tower blocks. This time however, you're concerned with just the one.

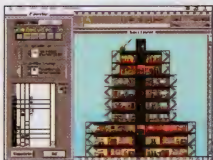
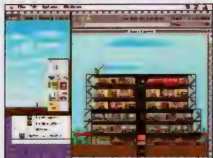
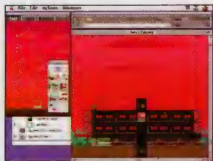
It's your job to build a skyscraper, encourage businesses and hotels to take up space, and then lay down stairs and elevators to help your people commute. You have to manage day-to-day problems to keep your people happy and the rent rolling in.

Essentially, this is *SimCity* with elevators instead of roads and rooms instead of houses. Trouble is, there's not much to the game beyond these bits.

There are bug infestations and the occasional fire with which to deal, but most of the time, *SimTower* sees you standing around waiting for cash reserves to grow in order to add more floors.

Not much fun at all.

Rating: ★★



The early construction is the most important stage (top). As levels reach completion, Sim tenants begin their dreary lives (middle). Once your building grows, there is little to do but play with the elevators (bottom)

Macintosh

PeqLog

Publisher: Changeling Software
Developer: High Risk Ventures
Size: 2.2 MBs
Release Date: Available now

A no-holds-barred shoot-'em-up that's addictive enough to be called evil, *PeqLog* is a game that turns out to be far more than the sum of its parts.

The slick interface (similar to that of *Crystal*

Quest), combined with 256-color rendered enemies and tons of sound effects turn what would be a ho-hum arcade game into a time-eating action fest. Multiple power-ups (autofire, new shots, shields, and super bullets), bonus stages, and new enemies on higher levels keep the game challenging for long-term play.

Better yet, the game's native Power PC format makes slowdown a thing of the past. Bottom line: if you've got work to do, better stay away from this game.

Rating: ★★★

rating neo-geo pc

NEO-GEO

No new Neo-Geo videogames were released this month.

PC

Cyberwar

Publisher: SCI
Developer: SCI
Size: 3 CD-ROMs
Release Date: Available now

Cyberwar is little more than a rehash of SCI's original title *The Lawnmower Man* with slightly changed action sequences and the 256-color graphics supposed to be included the first time. The vast amount of data included on

the three disks is used, for the most part, to store the rendered rooms that, while beautiful, are nothing but background. Varying styles of play keep the game from being a total loss, but in the end, the game will most likely only impress beginners and fans of the Stephen King movie.

Rating: ★★

Lode Runner: The Legend Returns

Publisher: Sierra
Developer: Dynamix
Size: 2 Disks
Release Date: Available now

One of the most popular games on every Apple II in the early 80s is back for another go in this attractive remake from Dynamix. Far from being the same stick



Lode Runner may have a new look, but Dynamix's retrogame still plays much the same

figure represented in black and white, *Lode Runner: The Legend Continues* has the latest in 256-color background and character graphics along with a pleasant soundtrack and some gruesome sound effects. But even with a couple of new weapons and tile types (ice and slime are very cool), basic play is about the same as the original, a fact that

may not appeal to those looking for a unique challenge.

Rating: ★★

King's Quest VII: The Princess Bride

Publisher: Sierra
Developer: Sierra
Size: 1 CD-ROM
Release Date: Available now

Sierra's flagship series has changed once again to up the ante in graphic adventures. *King's Quest VII: The Princess Bride* has dispensed with idealized fantasy images of the past in favor of highly detail cartoons that give the entire game the feel of a Disney film. Six chapters enable you to control Rosella in her quest for a husband, and for her mother Etheria as she searches for Rosella.

As usual, a fantastic soundtrack backs up the game. While it's certainly not the most

PC

The first shooting stage (right) puts players behind the controls of a huge assault cannon



Character stages look good, but are hindered by unrealistic turns and an unforgiving puzzle interface



Plot sequences show off the SGI power that makes *Cyberia* look so good while keeping the storyline fluid (inset)



TEXTURED

Cyberia

Publisher: Interplay
Developer: Xatrix
Size: 1 CD-ROM
Release Date: Available now

Xatrix's *Cyberia* is an interesting new "interactive movie," combining sleek, SGI rendered graphics, a hard-hitting soundtrack, audio effects, and some of the best texture mapping ever laid out on a PC. But it never achieves the level of interactivity that's required to make it a truly great game.

The absorbing storyline follows the adventures of an unlikely hero named Zak. Uncovering an enigmatic weapon of the past from its well hidden tomb, you try to figure how to keep yourself alive

once it's found. Control in the story stages is a cross between the free keyboard motions of *Alone in the Dark* and the "do the right thing or die" system of *Dragon's Lair* allowing the player to explore where they want, while keeping them firmly railed on the plot path. Action sequences work on a similar principle, and like *Rebel Assault* or *Loadstar*, they end up being little more than simple shooting galleries from the early 80s.

But even with these drawbacks, *Cyberia* keeps itself above the competition by mixing sequences with puzzles and plot devices that keep the gamer drawn into the story and his/her character. In the end, there's nothing in the gameplay that's new, but no one has ever managed to do it as well.

Rating: ★★★

PC

STORMY

Zephyr

Publisher: New World Computing
Developer: New World Computing
Size: 1 CD-ROM
Release Date: Available now

Basically a classic shoot-'em-up with network capabilities, New World Computing's new title, *Zephyr*, pushes multiplayer gaming forward while showing many of the flaws that have held the genre back for so long.

Like most successful games for more than one player, *Zephyr* is simple in both design and play. Gamers select a sponsor who will offer them an advantage in a particular stat — from better weaponry to faster energy recharge — and then enter an arena packed with new kinds of arms (missiles, nukes, freeze blasts, etc.) and other bonus items. Destroying other craft earns you points, as does lapping the arena. The player who has the most points in the end wins.

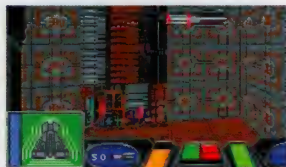
Unfortunately, the game is without some of the subtleties of play that define classic multiplayer fests like *Bomberman* or *Spectre*, and tends to break down into a free-for-all shootout after a few minutes of play. Even so, for those net fiends who have the urge to blow away friends over the phone line, there is some good gaming to be played here.

Rating: ★★★



Computer controlled enemies have a bad tendency to attempt a tête-à-tête showdown whenever they can. Don't let yourself get sucked in (top)

Before each battle, you'll get a full ESPN-style report of the battle that's to follow. These quickly get repetitive (inset). Weapons float in midair and require a fair amount of precision to hit while moving at high speed (right)



In *King's Quest VII*, Rosella not only gets a new flounce, she gets a whole new look

challenging game available, it may be one of the most impressive in look and feel, and fans of the series should definitely check this one out.

Rating: ★★★★★

Lords of the Realm

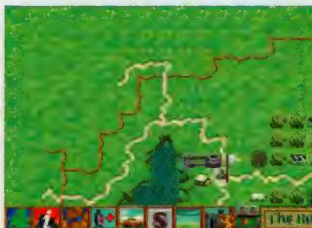
Publisher: Impressions
Developer: Impressions
Size: 1 CD-ROM
Release Date: Available now

This title is a complete medieval simulation with the look of *Warlords*, the feel of *Castles*, and the brains of *Civilization*.

One through seven players act as ruler for a single county,

responsible for all of the farming, military, and financial decisions therein. *Lords of the Realm* sets itself apart from other economic sims with random occurrences, truly challenging play, and better than average graphics, including rendered cut scenes that are truly amazing. Player controlled battles add yet another dimension to the already diverse game play, and play a lot like EA's classic wargame *Centurion*. Strategy fans must own this title.

Rating: ★★★★★



Running your own kingdom in *Lords of the Realm* may seem like fun and games, but it's actually a lot more work than you can possibly imagine

Menzoberranzan

Publisher:SSI
Developer: DreamForge
Size: 1 CD-ROM
Release Date: Available now

One of AD&D's newest gameworlds comes to life in the last computer version to ever be released under the SSI label.

In a first person role-playing adventure somewhat similar to the company's *Eye of the Beholder* series, players will

launch an assault on *Menzoberranzan*, the subterranean home of the mysterious Drow Elves. The visually imposing realm of dark caverns and bizarre monstrosities is presented in an appealing high-resolution VGA that gives a painting-like quality to the surreal surroundings.

Gameplay, while not as involved as SSI's overhead classics, is true to the AD&D universe, and includes more than 90 different spells, 31 monsters, and 6 character classes straight from the pen and paper RPG.

Rating: ★★★

Noctropolis

Publisher: Electronic Arts
Developer: Flashpoint Productions
Size: 1 CD-ROM
Release Date: Available now

Comic book camp meets adult entertainment in the first EA adventure to bear the mature software rating. Players take on the role of a comic book junkie who's pulled into an epic battle of good and evil.

The story, filled with plenty of twists and turns, requires abstract puzzle solving skills challenging even to veterans of computer adventuring. Backing up the strong plot are very sharp background graphics (drawn in classic comic-book style) and great digitized character animation. The CD quality sound includes vocals along with on-

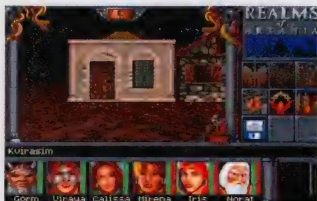
rating sega cd

screen text and dark soundtrack complementing the on-screen atmosphere. On the down side, some of the dialogue gets silly for a game that's really aiming at an adult audience, and puzzles often require players to make somewhat-less-than-logical intuitive leaps. Those not requiring the utmost in realism will find this to be one of the best graphic adventures of the season. **Rating: ★★★★★**

Realms of Arkania: Star Trail

Publisher: Sir-Tech
Developer: Attic Software
Size: 1 CD-ROM
Release Date: Available now

The return of the old-school RPG, Sir Tech's *Star Trail* is sure to appeal to those gamers who would lose months at a time fighting evil. Unfortunately, even with its new control system (reminiscent of New World's



Realms of Arkania: Star Trail's interface gives players a new freedom of motion in towns, dungeons, and on the road. Above are few of the players from which to choose

Might and Magic series), graphics, and sound that far outclass those of *Wizardry*, the game may be too complex for the beginning adventurer to tackle. Even so, the game's wealth of more than 350 weapons, armor, assorted magic items, 50 monsters, and unimaginable scores of character stats make for a game sure to keep patient gamers absorbed for hours. **Rating: ★★★**

Rise of the Robots

Publisher: Time Warner
Developer: Interactive
Developer: Mirage Technologies LTD.
Size: 1 CD-ROM
Release Date: Available now

Now that the long voyage to release is finally over, it looks like *Rise of the Robots* probably should have stayed at the

drawing board. Although the glossy rendered images make the seven different warriors look truly remarkable, the actual playability of the game suffers from the same lack of control plaguing most PC fighting games. Poor computer AI makes strategy against the computer either remarkably simple (stand in the corner and kick them in the legs), or next to impossible (your moves are countered almost as soon as you begin). *Rise of the Robots* is one of the biggest disappointments of the year. **Rating: ★★**

U.S. Navy Fighters

Publisher: Electronic Arts
Developer: Electronic Arts
Size: 1 CD-ROM
Release Date: Available now

A great new flight model featuring five different fighters (F-14, F/A-18, A-7, F-22, and even the Su-33), and 50 different missions (including antiship, ground strike, and air superiority missions) makes EA's *Navy Fighters* one of the most impressive new flight sims in years. This realistic carrier-based adventure combines top notch graphics, unbelievable computer AI (that will have the enemy ganging up on you), and support for just about every flight gadget ever made (Thrustmaster flight, weapons, rudder control systems, FlightStick PRO, et al.). Despite heavy system requirements, this is a must for every flight freak. **Rating: ★★★★★**

SEGA CD

Bouncers

Publisher: Sega
Developer: Dynamix
Size: 1 CD-ROM
Release Date: Available now

Bouncers is the sort of game that leaves you wondering how to review it. It's a combination fighter and basketball game, with you as the ball. The idea is to choose one of 12 weird bouncing warriors, choose one of 12

Sega CD



The game's intro screens are mostly a series of still comic book "panels." Surprisingly, these are very effective (left). And here's the game — pretty much all of it. It looks great, but you get a little tired of all the similar levels (top)



Oh, and watch out for the dinosaurs. They have a nasty habit of squashing you flat



FLOWING

Cadillacs and Dinosaurs

Publisher: Rocket Science
Developer: Rocket Science
Size: 1 CD-ROM
Release Date: Available now

Taken from the comic book and upcoming cartoon series of the same title, *Cadillacs and Dinosaurs* is a mystic quest in which you drive through an ancient forest in a souped-up Caddy, dodging and blasting rocks and other obstacles, while simultaneously trying to avoid local fauna.

From a technical standpoint, this is very impressive. The terrain whizzing by is incredibly fluid, handled with almost no disk access time at all. On the down side, you have to actually steer the car down different branches in the path, and while that's cool (and again, technically handled very smoothly), it's possible to spend much time driving in circles. Also, it would have been nice if the game weren't basically the same, level after level.

However, on balance, it's smooth, fast and exciting, and what more could you ask for?

Rating: ★★

Sega CD



DOWNHILL

Phantasy Star IV

Publisher: Sega
Developer: Sega of Japan
Size: 24 Mbits + Battery Back-up
Release Date: Available now

The *Phantasy Star* series, the most successful Genesis RPGs ever, has slowly careened downhill ever since the first title made its debut on Sega's original 8-bit Master System. *PSII* for Genesis was good, but lacked the personality and variety of the first. And *PSIII* spread itself too thin juggling multiple scenarios and storylines, resulting in several bland adventures instead of one good solid one.

The early word on *PSIV* was it would return the series to the quality of the first games with a single dedicated storyline, new

Here we go again. By now, *Phantasy Star* vets should be able to walk and fight in their sleep. They'll get the chance (left). However, the stuff that made the series a hit is still here. Die-hard fans won't be disappointed (inset).



features, and an adventure so big *PSIV* had to be 24 Mbits, plus battery back-up (which pushed the price tag to an unfriendly \$99). For months, Sega couldn't decide if the lofty cost made the game a worthwhile US release, considering that we Americans aren't as RPG crazy as the Japanese.

PSIV does boast new bells and whistles, such as vehicular combat, a new streamlined battle system, and a much more involved storyline. However, none of this dramatically changes the look or play of the game. The graphics haven't improved since *PSII*, and the game's structure hasn't seen any serious changes. Since the series' *PSI* and *II* heyday, *The Secret of Mana* and the *Final Fantasy* games have pushed the genre to new limits with innovation and incredible graphic detail. *PSIV*, while still a good game, is years behind.

Fans of the series will be glad that the new storyline finally attempts to tie the events and characters from past *Phantasy Star* titles together. (The series has become notorious for forgetting the previous games with thousand-year jumps between each one.) Familiar characters from as far back as *PSI* crop up from time to time, as well as references to the monumental adventures that once took place. For the first time, you get the strange feeling that *Phantasy Star* is an actual series.

If you're one of the many RPG-starved Genesis owners who have been waiting diligently for this game, don't worry — it's still plenty of fun.

But with nothing that goes above or beyond the previous titles — including the same "mysterious" end boss — the future of this series isn't very bright.

Rating: ★★★



The few new bits, like vehicular combat, are good but fail to add anything to the overall gameplay

playfields, then jockey around, trying to bounce off the other player so you can get high enough to drop through a basket. It's goofy as hell, and a complete blast. However, it's such an odd concept for a game that it seems you either love it or hate it. Fortunately, we liked it.

Rating: ★★★

Darkseed

Publisher: Vic Tokai
Developer: Cyberdreams
Size: 1 CD-ROM
Release Date: March

This is a direct port of Cyberdreams' PC title. The game deliberately comes with few instructions, and we don't want to give away too much. *Darkseed* is a perfect example of graphic-adventure-as-nightmare, enhanced with graphics by H.R. Giger, designer of the original *Alien*.



In *Bouncers*, two strange looking, ball-headed characters fight to bounce off one another for the privilege of dropping through a hoop. It's as fun as it sounds, if that sounds good...

As Mike Dawson, you wake from disturbing dreams with a splitting headache, followed by a journey into hell. Half of the game's appeal lies in the bizarre and frightening hallucinations suffered by the hero (or maybe they aren't hallucinations...). We recommend checking it out.

Rating: ★★★

Ecco 2: The Tides of Time

Publisher: Sega
Developer: Sega
Size: 1 CD-ROM
Release Date: Available now

Sega's star-crowned dolphin has returned, swimming and sounding off through more than 40 labyrinthian levels that look and play a lot like the first game.

The CD version improves on the cartridge by improving the graphics, adding more depth, and by improving the music over the old.

However, the biggest addition is the CD's "history glyphs" — crystals that trigger rendered video segments showing Ecco's story. These flashback scenes are very nicely done, and

completely charming. They add a lot depth to Ecco's history and make him even more irresistible than before, though they are just sort of hung on as an extra ornament, and add not one iota to immediate gameplay.

Rating: ★★★



Yup, here's Ecco. The cute little rendered dolphin loved by children everywhere is back for more of the same swimming fun. The CD features Ecco's past through "history glyphs"

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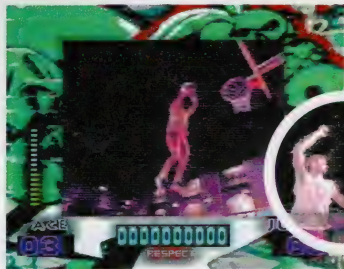
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rating genesis

Sega CD



Sometimes Ace doesn't do what you want him to, and occasionally your opponent does something that he shouldn't be able to from where he's at (inset). However, there's plenty of slammin' roundball action, and it's a lot of fun, especially if you like the sport (left)



See the guy hovering in the foreground? That's you, "Ace." You control him like you would any videogame character, and try to react to what's going on in the video

SLAM

Slam City with Scottie Pippin

Publisher: Digital Pictures
Developer: Digital Pictures
Size: 4 CD's
Release Date: Available now

Between this and *Supreme Warrior*, Digital Pictures comes closer to making a good game from live video. Here, you're challenging four basketball players on a street court, and if you can beat them

all, you get a chance to go one on one with the Chicago Bull's Scottie Pippin. Your character, Ace, hovers in the foreground, and you can dodge left and right, reacting to the video, waiting for an opening to make your move.

If it works better than *Supreme Warrior*, that's probably because you have fewer controls to memorize. There's still a problem with consistency (opponents have a bad habit of instantly breaking by for a dunk even when they appear to be a good 10 feet away), and the control isn't what it could be, but overall, it's solid entertainment, and basketball fans will love it.

More than anything, *Slam City* makes you hungry for DP's next release. Maybe a game with "100% full-motion video" holds some promise after all. A three-pointer.

Rating: ★★



In *Midnight Raiders*, you watch the video, then line up the crosshairs and watch the same footage of choppers exploding over and over again

Midnight Raiders

Publisher: Sega
Developer: Sega
Size: 1 CD-ROM
Release Date: Available now

Yet another in the 'watch the video, push a button' style of

games growing in numbers. This title features some mildly recognizable actors: Jules Mandel and David Crowley, for instance, but neither actor performs his part particularly well.

As an Apache gunner, you wait for the video to show you an enemy, line up your crosshairs,

and fire. Later you're on foot, then in a jeep, but the mechanics are the same, and there's a limited amount of video, which makes the 'action' repetitive and a tad boring. It's a step up from *Masked Rider Z*, but frankly, that's not saying much.

Rating: ★★

GENESIS

Aero The Acrobat 2

Publisher: Sunsoft
Developer: Sunsoft
Size: 16 MBs
Release Date: Available now

Sunsoft continues to pump out solid titles with great gameplay. Now, if they could just start churning out some original ideas they would be in business.

The original *Aero The Acrobat* was anything but original, and now there's a sequel. *Aero 2* is more of the same solid and unoriginal gameplay, packaged in a different manner: It's packed with 45 levels of improved graphics and Sound F/X — and a



Aero the Acrobat 2's Disco zone, complete with psychedelic backgrounds and grooving tunes

Disco level. That's right, the long awaited Disco level, complete with mind-bending backgrounds and groovy tunes. Throw in a snowboard, a rocket, and more evil from Edgar Ektor and you're in for some serious gaming. Then again, if you've seen enough of this type of game, *Aero 2* isn't going to change your mind.

Rating: ★★

Mega Bomberman

Publisher: Sega
Developer: Hudson Soft
Size: 8 MBs
Release Date: Available now

The extremely addictive *Bomberman* hooked Nintendo,

THIS CAT LOVES TO DOGFIGHT



DESIGNED BY THE BEST: The award-winning creators of Chuck Yeager's Air Combat.



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A bomberman riding a kangaroo? While *Mega Bomberman* adds new tricks, it's not the same

PC, and Turbo Grafx fans everywhere, and now Genesis owners can finally taste the game that has been described as the thinking man's chess.

Unfortunately, *Mega Bomberman* isn't the same great game that has kept **NEXT Generation** glued to its SNES for the last six months, instead Sega reworked *Bomberman*, with completely different power-ups and strange creatures to ride.

If you're not familiar with *Bomberman*, you place your bombs on a playing field, blow up walls, and collect icons in order to turn on your neighbor and blow him to bits. *Mega Bomberman* plays the same premise, but the beautiful simplicity of the original is gone. Still, any Genesis owner with three friends and a multitap must have this game.

Rating: ★★★

NHL All-Star '95

Publisher: Sega
Developer: Double Diamond
Size: 16 MBs
Release Date: Available now

After Sega Sports' NFL '95 showed that *Madden* wasn't the



Glistening ice, big players, and all the real players give *NHL '95* hope, but slow gameplay leaves this one cold

only show in town, we had high hopes for its attempt at dethroning EA's *NHL All-Star '95* as king of the ice. But the only

thing Sega's hockey game took from *NHL '95* was the name. Sega's *NHL All-Star '95* features the player's license, the stats, and the season mode, but it doesn't have any of the great hockey action the EA title is known for. The players, the ice, and the crowd look great, but this game just doesn't play like hockey. The slow pace and wonky control keep Sega's *All-Star NHL*

'95 in the middle of the hockey pack with a host of other wanna-be's, and until next year, EA's *NHL '95* still holds the cup.

Rating: ★★★

Rugby World Cup '95

Publisher: Electronic Arts
Developer: Electronic Arts UK
Size: 16 MBs
Release Date: Available now

Apparently, EA's UK division wants some rough and tumble football games for all to enjoy. *FIFA Soccer* came on last year as



An all out brawl for the ball is *Rugby World Cup '95* at its finest

a great game and a mild hit and now EA is giving rugby a shot.

Those unfamiliar with rugby and its odd rules are sure to scratch their heads for hours figuring out the barbaric sport's nuances, but once they have figured it out, they're sure to have a blast.

For all of rugby's peculiar terms (like grubber kick) and chaotic rules, it is basically a combination of soccer and American football. The graphics and gameplay are on par with *FIFA* and EA managed to acquire the elusive rugby license so it can present the full rugby rosters of each and every country.

Rugby World Cup '95 is a quality sports game serving as a great welcome to the sport of rugby, oh, and not to mention the game is damn fun.

Rating: ★★★

Sega Genesis



Rich six-layered backgrounds give *Ristar* an underwater world that Ecco could only dream of (top)



Cute expressions and a hard head make this little star special (inset). A natural born star, *Ristar* loves to go airborne and it makes for great gameplay (right)



STARTLING

Ristar

Publisher: Sega
Developer: Sega
Size: 16 MBs
Release Date: Available now

Sega's own rising star, *Ristar*, joins the likes of *Sonic*, *Mario*, *Bubsy*, *Aero*, *Zero*, *Zool*, and *Dynamite Headdy*, to name a few, in the overcrowded, cutesy, mascot business. However, *Ristar* is much more than just another cutesy mascot in another cutesy platform game, *Ristar* is one of the best platform games to date.

Ristar is a shooting star from a distant galaxy headed to save the world from the heinous villain Greedy (now what kind of chance does a kid have when he's got a name like that?). You jump, swing, and shoot this stylish star through 14 unique stages across the solar system bringing peace to the innocent. All the while, you must guide *Ristar* through six-layered backgrounds, complete with slick transparencies, original bosses, and great music.

Ristar doesn't just jump on heads. This tough little star uses his elastic arms and concrete cranium to smash his enemies with a powerful headbutt. He also uses his Mary Lou Retton-like gymnastic skills to swing and flip through the air for bonus points and rounds. Add to that *Ristar*'s underwater prowess and you've a mascot and a game with endless versatility and loads of fun.

Ristar borrows heavily from Sega's other budding mascot, *Dynamite Headdy*, but it still contains enough original gameplay, solid action, and fun to escape the "copy-cat" label and be one of 1995's more promising games.

Rating: ★★★

rating snes

Sega Genesis

HOLE IN ONE

PGA Tour III

Publisher: Electronic Arts

Developer: Polygames

Size: 16 MBs

Release Date: Available now

For EA's *PGA Tour Golf*, the third time is a charm. The latest installment of the *PGA* series takes Genesis golf to another level (no not 32X) with added realism, play features, and courses. Now, you not only play against the PGA pro's, you play in a foursome with Tom Kite, Fuzzy Zoeller, and Craig Stadler — talk about intimidation. There is still the skins game, the tournaments, and a season full of stats. The 10 pro's, realistically digitized as they drive their way through 8 different courses, including great courses like Sawgrass and Avenel.

Other Genesis golf games have looked better (like the first Genesis golf game, *Arnold Palmer Golf*), but none maintain the depth of play or the true PGA experience like *PGA III* has captured. The best swing interface in the golf game world has been improved with an arc meter that helps control backspin.

Golf fans put down that *Golf Digest*, keep your eye on

the ball, keep your left arm straight, and pick up this game.

Rating: ★★★★★

If you ever make it to the leaderboard you have way too much time on your hands (and this month, we did) (left)



Tom Kite, his traditional hat, and smooth swing are all here (inset). Number 5 at Sawgrass. Go for it in two or lay-up for a par? That's PGA action (bottom)

Viewpoint

Publisher: American Sammy

Developer: American Sammy

Size: 16 MBs

Release Date: Available now

This Neo-Geo classic shooter weighed in at 76 MBs on the Neo-Geo, and all American Sammy had to do was stuff 76 MBs into a 16 Mbit Genesis cart. They have pulled the stunt off with amazing success.

The Genesis version has all the Neo-Geo levels and plenty of shooting. However, the graphics can't compare to the Neo-Geo version and its attempt to bring over the riveting techno

soundtrack was valiant but unsuccessful. So, in the end, *Viewpoint* is simply a 3/4 perspective shooter, where you fly along blasting everything in your way avoiding death (76 MBs?). Granted, there is a ton of variety to what you're shooting at and the control is excellent, but the levels are redundant and the shooting turns dull.

Viewpoint is easily the best shooter this year — and the only shooter for the Genesis — so *Zaxxon* fans will love the resemblance. However, like one famous writer once said, a shooter is a shooter is a shooter...Right!

Rating: ★★

SNES

Brutal

Publisher: GameTek

Developer: GameTek

Size: 16 Mbits

Release Date: Available now

The original Sega CD version of *Brutal* was outstanding, considering it was the company's first in-house product. The time between Sega CD *Brutal* and the new SNES title was well spent — the rich, shaded backgrounds appearing as the most notable improvement. Like other brawlers, these feisty cartoon characters are the obvious hitch. The gameplay is fine, although the character control is delayed, and special moves are tricky.

Be sure to look for an even smoother playing game when the Genesis version hits the shelves in the near future.

Rating: ★★

Ignition Factor

Publisher: Jaleco

Developer: Jaleco

Size: 8 Mbits

Release Date: Available now

This is the first title that Japanese-based Jaleco designed with input from its US offices. At first glance, the fire-fighting angle promises a new game play experience, but this title is a repackaged version of older games like Capcom's *Commando* and Sega's *Alien Syndrome*. Basically, the numerous missions center around finding and rescuing people before the time limit expires and the entire building collapses.

The action is good, but stages are repetitive, and mostly just rearrange the placement of hostages without adding any significantly new gameplay.

Rating: ★★

Looney Tunes B-Ball

Publisher: Sunsoft

Developer: Sculptured Software

Size: 16 Mbits

Release Date: Available now

Looney Tunes B-Ball cashes in on Nike's "Hare Jordan" commercials, featuring "street-smart" versions of *Looney Tunes* characters at the height of T-shirt fashion.

Featuring two-on-two action — bearing strong resemblance to *NBA Jam* — the CPU controls your teammate, with emphasis on fast action rather than simulation,



Young players will be hypnotized by Looney Tunes B-Ball's great graphics and simple gameplay

and the turbo buttons are even in the same place. But if the action in *NBA Jam* was over the top, then this game is... looney. It's fun for all ages and easy enough for younger players to play.

Rating: ★★

Michael Jordan: Chaos In The Windy City

Publisher: Electronic Arts

Developer: Creative

Development

Size: 12 Mbits

Release Date: Available now

While admiring EA's efforts to use Michael Jordan in new and unique ways, it may have done better with another hoops simulation. Instead, Jordan battles Windy City mutants in haunted house-type settings, with basketball hoops seemingly thrown in for good measure.

The objective: to find and release kidnapped basketball players by searching through numerous mazes for keys to their cells. The backgrounds are redundant, the mazes repetitious, and the action never improves for 24 mind-numbing levels.

Kudos for the original concept, but again, Jordan should have stuck with basketball.

Rating: ★★

Radical Rex

Publisher: Activision

Developer: Beam Software

Size: 16 Mbits

Release Date: Available now

Forget the sales reports pointing to "mascot death" in 1994, the recent trend to aim for an older audience, or avoiding things cute and small. None of that means *Radical Rex* can't be a great little platformer. Unfortunately, it isn't. The graphics are a total paradox — a bright, smiling, skateboarding kid-dog moving against a dark, murky, colorless world. The action is reminiscent of games like *Adventure Island* and *Joe and Mac* at times, but it is consistently flat, unmotivating

and not up to par with other platform games. You've seen it before, usually better.

Rating: ★

The Shadow

Publisher: Ocean
Developer: Ocean
Size: 16 Mbits
Release Date: Available now

Anyone who's played the million or so *Double Dragon* clones will

find that this title offers nothing new to the genre. *The Shadow* isn't a bad game, but it's as good an example as any of the 'dead-average' game we've seen in months. Fans of the character will be glad that the Shadow's steadfast, undefinable power to 'cloud men's minds' has been incorporated, if only in the form of a few special attacks. The game shows good graphics, includes a nice soundtrack and so-so intro screens, but gameplay is strictly punch, punch, punch....The

Shadow boils down to a 'take-it-or-leave-it' no-brainer of a title.

Rating: ★★

Uniracers

Publisher: Nintendo
Developer: DMA Design
Size: 16 Mbits
Release Date: Available now

At first, you play through three different mindsets in five minutes, and *Uniracers* seems childishly simple in both graphics and premise. Other than the smooth moving unracers themselves, there isn't much to attract anyone to play.

But one race later the speedy, super-slick racing hooks you in. Another quick set of stages completed and you realize that the 'hook' isn't sharp enough to hold your interest for very long.

Uniracers is really a neat and innovative title slightly more

and each of the three must be defeated — before the game ends. There's nothing terribly new or exciting in this game other than it's new, and you may be disturbed by having to play two of the three characters on at the team you've chosen.

But overall, this approach makes the game economically worthwhile in an age where 50¢ to \$1 to play a game is the norm. The game itself is decent and delivers quality play SNK games usually offer. It's hard to pass.

Rating: ★★★

Mazinger Z

Publisher: Banpresto
Developer: Toei
Size: 2 Player standup
Release Date: Available now

While Banpresto offers a new, quality shooter game on the arcade floors, it may not fare so well in this 'fighter' era. Using the 'Xevious' concept, *Mazinger Z* offers another action-packed game for the very skilled, hand-eye coordinated player. The graphics are good, better than those in *Raiden 2*, and the action is intense.

You'll find yourself weaving through a blur of enemies, shrapnel, light, and missiles as you take your character, a retro-Shogun Warrior based off the late 70's classic, to its extreme. For those Shogun Warrior fans, this game is fantastic, for anyone else, it's OK.

Rating: ★★★

Samurai Shodown II

Publisher: SNK
Developer: Neo-Geo
Size: 2 Player standup
Release Date: Available now

In an age dominated by street fighters, the *Samurai* still prove to be honorable. SNK's *Samurai Shodown II* offers more of the same but that's what makes it so darn good.

Four new characters are introduced to add more variety though *Shodown* fans will surely not replace their favorites from the original cast. The upgrade on the graphics and sounds of clashing steel possibly create a 'new' drama, but are only minor improvements to the original.

Although it's not much of an upgrade, *Samurai Shodown II* continues players' quarter reservation habits as eager players await their turn.

Rating: ★★★★★



SNES

LACKING

Jurassic Park II: The Chaos Continues

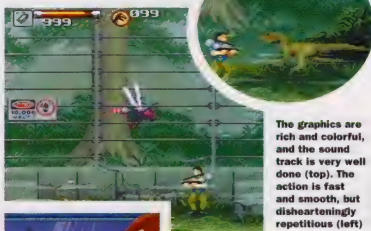
Publisher: Ocean
Developer: Ocean
Size: 16 Mbits
Release Date: Available now

Although Ocean's first *Jurassic Park* title was well-received, the company tossed the original design in favor of a more straightforward side-scroller. This time, as a soldier in a special military unit, your job is to fly to Jurassic Park to prevent others from using the dinosaurs for their own immoral purposes.

At first play, the overall presentation is impressive. The intro story is compelling, the graphics are good, and the soundtrack is amazing, especially if you take full advantage of the game's Dolby Surround compatibility.

The real test is gameplay. You must complete several missions ranging from fixing the island's communication antenna to the unenviable task of stopping a *Tyrannosaurus rex*'s rampage. The action, no matter what the situation, ultimately waters down to the usual 'run-and-shoot' cash-cow. With several weapons at your disposal, the only real strategy is to make sure dinosaurs die — it doesn't really matter how. The substance isn't bad, but there's just not that much.

Rating: ★★



The graphics are rich and colorful, and the sound track is very well done (top). The action is fast and smooth, but dishearteningly repetitious (left)



What these intro screens lack in illustration, they more than make up for with digitized dialogue and movie-quality music



The backgrounds in *Uniracers* aren't stunning, but the game is oddly fun

fun to play against another opponent. But it doesn't take long to wear out the novelty that attracted you in the first place.

Rating: ★★

ARCADE

The King of Fighters

Publisher: SNK
Developer: Neo-Geo
Size: 2 Player standup
Release Date: Available now

The King of Fighters approaches the street fighting genre with a 'triple' twist. Representing a country, you choose a team consisting of three fighters who battle against other three-person teams. The so-called all-star cast consists of a few new and many old characters from previous SNK games (*Art of Fighting*, *Fatal Fury I and II*, *Samurai Shodown*, etc.).

The cool, affordable twist is that the player has three lives —

corresponding

Express yourself. It's easy. Write to **NEXT Generation** letters, 1350 Old Bayshore Highway, Suite 210, Burlingame, CA 94010. Or fax us at (415) 696-1678. Or e-mail us at ngonline@aol.com. We cannot reply personally to all correspondence, but everything is read.



Correspondence, Communication, Mail, Post and — yes — Letters.

Dear staff of **NEXT Generation** magazine: Your entry into the mainstream US market couldn't have come at a better time. Gamers are growing up, but we aren't reminiscing, and we are looking for the bottom line in a fresh, direct, informative manner, without the kiddie hype. I used to be a regular subscriber to one of your now-competitors. But what I found out was, I wasn't enjoying the information because it was being covered with SLOP. Editorial slop, tips and tricks slop, and media plays. I got sick of it. I searched in vain for something with the same depth of information without the ugly edge, and maybe more on my level of understanding. Having written a videogame screenplay, I was able to see right through the other magazines immediately.

Anyway, my point is, **NEXT Generation** is right on target. **DONT CHANGE!** As soon as I can scrounge up the money my subscription will be in the mail. I'm trying to think of a complaint, but the only one I can think of is why haven't you published this magazine in the US sooner?

Good luck with your professional, trend-setting publication.

Christopher Feyrer
Feyr2624@uwwax.uww.edu

A big 'thank you' to everyone who took the time to write and tell us how much they like **NEXT Generation**. Christopher's letter is typical of hundreds we've received — all telling us "Don't Change!"

It's nice to know we got it right, but we will change. We're going to get better. Watch this space for more details.

I just want to say that I enjoyed reading your magazine and especially liked how it was directed toward adults, instead of kids, like the other videogame magazines. I would like to make one suggestion though, instead of reviewing games for the Genesis, Nintendo and Sega CD, maybe you could use that space to provide more pictures or more reviews of the other systems. I say this because the Genesis and those other 8- and 16bit systems aren't next generation systems and I don't think people are buying your magazine to read about those games.

Greg@alpha.uwindor

A valid point, but we cover existing 16bit systems for three real reasons: 1) The bottom line is that although we're obviously all extremely interested in the next generation game machines, a lot of playing is still done on Sega CD, SNES and Genesis. Also, as developers will inevitably spend the first few months of any new system's life simply experimenting with what the machine can do, the 16bit systems can be expected to be the new systems' equal in terms of gameplay for the immediate future. 2) No one else reviews games for these systems as objectively as we do. 3) The 16bit systems provide a useful reference frame for rating the new 32bit and 64bit games.

Yeah, how's it going? Man, you will never know how excited I was when I found your new rag at the newsstand. But I will let you know how disappointed I was when I got it home and actually read the thing.

I will start out by saying that I believe that these are indeed exciting times for all of us when it comes to videogaming, and that there won't be room for all of the new systems that are coming out. What I would like to know is, why do you guys take it upon yourselves to decide which systems will rule and which ones will fail? Trip Hawkins is one of the best tap dancing bulls#&ers out there and you guys sit there and brown nose with him. I feel that you guys missed the mark big time by saying that the 32X was a mistake. But we'll see really soon, won't we?

I'd also like to know why you guys are so quick to step on the Jaguar the way you did. What systems do you plan on covering in your future issues, if you are going to start out by slamming two of less than five new systems available! #@%! Jesus Christ! Keep on kissing Trip's ass, and I'll keep reading real gaming magazines.

HPYC20A@prodigy.com

You thought we brown-nosed Trip? 3DO didn't think so and called us to complain at the coverage it received in the premiere issue. The fact is that, although Jaguar is here and now, Atari's machine does suffer from a lack of quality software and is underserved by the 32bit machines from Sega and Sony. We present facts. You can then draw your own conclusions...

Iwould like to congratulate you on the premiere issue. A magazine that finally caters to a more mature audience. Instead of wading through countless advertisements and fuzzy

screenshots, I can actually sit down and READ a gaming magazine. Again, thank you! Be prepared for my subscription card. By the way, I'm submitting a US money order, do I make it out to **NEXT Generation**? Please reply via e-mail on this matter since I don't want to miss out on this subscription offer!

The articles are excellent (esp. the Trip Hawkins one) and give a better view on behind-the-scenes of companies and their hardware/software without glorified descriptions that any elementary kid can write — concise and to the point as well as the good and the bad. The technical information on the upcoming and present consoles is clearly presented and can be easily compared by the reader.

Love the layout, love the cover, love the screenshots, love the.... you get the picture! Wish I could buy the **NG** staff dinner one night but I'm a university student so please accept my subscription card instead.

< sigh> Back to waiting for the next issue of **NG**...

Congratulate yourselves on a job well done!

-jAmEs
3jwl1@qlink.queensu.ca

Thanks. Subscription details can be found in between pages 32 and 33. Any checks for subscriptions should be made out to GP Publications.

Saw your mag, today, and I admire what you're doing. As you may or may not be aware, the remains of Commodore International (makers of the Amiga and the unknown to the US CD32 game system) are being haggle, and

within the next two weeks a brand new owner of its technology will emerge.

I hope that when the battle is over and proper marketing efforts of the new company make the CD32 (and soon CD64) known here that your magazine will include this system in your coverage as well.

Thanks again for a cool magazine. Oh, and thanks for keeping an open mind.
mortlieb@delphi.com

Yes, we're following the Commodore story as closely as you are. Last month we printed an update, and we hope to bring you more news next month. The fact is that, although the CD32 is technically OK (but not outstanding), very little software has been anything other than shovelware (existing 16bit Amiga games simply given a new CD soundtrack and intro sequence). **NEXT Generation** will be the first to talk with whomever takes charge of Commodore CD32 and reassess our policy then.

Congratulations — the review of *Doom 2* was dead on. With all the hype this piece of software got from competing magazines, I thought I wouldn't need another piece of software again. Ever. Don't get me wrong, I thought the original *Doom*, and I still believe it is one of the most groundbreaking games to date. I spent hundreds of hours playing it. *Doom 2* is the equivalent to waiting excitedly for the new model year of a car to arrive, and then finding out the only difference is an extra cup holder. Capitalizing on a successful program for profit's sake is what America's about, but other magazines did their readers a disservice with their reviews.

Keep calling it the way you see it, educate your readers, and you will have a successful future.

Scott Sbihl
scott6487@aol.com
Cincinnati, OH

We just got your new magazine where I work and I must say that I really like the format. I was surprised to see that you won't

be posting hints...but, heck, everybody does that. Good solid game reviews are what we need to see more of to better inform the consumer on how to spend their videogame dollars.

Scott Verity
scott.verity@hofbbs.com

Hey, guys! At the heart of all gaming magazines should be the best interests of its readers, yet I still have not read one magazine that notifies its readers of major flaws in games. My most recent example is *NHL '95* for the Sega Genesis. I wish I had been made aware of the fact that if I won too many games I'd automatically be dropped to the bottom of the standings and, thus, knocked out of the playoffs. Who does EA pay to play-test their games? I pay around \$60 per game, and I think I deserve a game free of bugs unlike the one I mentioned.

Will **NG** be recognizing this problem, or will it bow to the game companies so as to not jeopardize its advertising revenue? Who is more important to **NG** ultimately? Keep up the good work!

Kent Frechette
Kent.Frechette@lambada.oit
.unc.edu

A good question: Should **NEXT Generation** be for readers or advertisers? Here's our policy: If we continue to tell the truth, if we continue to publish an entirely honest, objective and — if necessary — hard-hitting magazine, then we'll gain the trust and support of more readers. Our circulation will rise to the point that no advertiser can afford to ignore us, whether they like what we say about their product or not. It's a long-term buck we're making here, we're not going to compromise editorial integrity for a fast profit.

Saw your report on Ultra 64 and have played *Killer Instinct* at the arcade and I couldn't believe how good the graphics are. Then I read in your report that the game was going to be exactly the same for the home version and that *Cruis'n USA* in going to be better than the arcade version.

So if the Ultra 64 is going to be that good for home at a cool \$250, then surely this would be the end of Sega and its puny 32bit Saturn System. And also, Nintendo's Virtual Boy is definitely on the way to put an end to Sega's Game Gear.

Will this put an end to Sega and possibly some of the other video game companies? Or is this just another one of Nintendo's empty promises that will never come to be?

Justin Hansen
Ultra64Guy@aol.com

Read all about Virtual Boy on page 18. As for whether Ultra 64 will destroy Sony or Sega, it's unlikely. Even if the hardware is superior (and it hasn't even been built yet — so don't swallow the hype whole), the lead Saturn and PlayStation will have established come Ultra 64's hype will be enough to ensure a tough fight.

Dear **NEXT Generation**, It seems that in the world of videogaming mags in the US you fall into one of two classes: Either you have a lot of interesting, wonderful information, yet either aren't geared toward serious gamers or don't have a lot of text, or you have a lot to tell but are filled with boring, old news. Your first issue seems to break from these two classes, and it's refreshing to see. A little more personality would be nice, and maybe a look at videogames from a female point of view (since female videogame players get little or no recognition), but other than that I await your future issues!

Shidoshi
shidoshi@gonix.com

What is the female perspective on playing games? We always thought that gaming was largely an asexual issue — it doesn't matter what sex you are. A lot more interesting are the game companies' marketing plans to attract more female gamers. Certainly the feeble attempts witnessed so far in gaming history (anyone remember the Barbie game?) didn't come up with the goods. Expect a full **NEXT Generation** report sometime in the near future.

I just purchased the premiere issue of **NEXT Generation** today and just wanted to let you know how great it really is.

However, I want to make a comment regarding your review of *Shockwave* for 3DO. Personally, I thought your review was harsh; as a matter of fact, I thought you were reviewing *Total Eclipse*. *Shockwave* seems sadly misunderstood by many reviewers because it straddles the edge between straightforward shoot 'em up and movie. On the flip side, your reaction tends to follow those I've demoted the game for — some gamers love it while others hate it immediately.

I agree that compared to some of the newer releases it's not on the cutting edge, but it's not as pitiful as you make it sound. I'm just wondering what you would write about *Total Eclipse* and how it would rate in comparison (I personally can't think of a more dull shoot 'em up for the 3DO platform).

Anyway, the mag looks great, keep up the good work!
Chris McAlistier
CM of KNOX@aol.com
Knoxville, TN

We call 'em like we see 'em.

Subject: Computers and your magazine.

I think your magazine should have two kinds of sections for computers instead of just PC. There should be PC and Macintosh. I have a Mac and don't get to play a lot of the games that PC owners do. But now programmers are starting to realize that the Mac has a lot of potential. Companies like Bungie, who make great games like *Marathon* and *Pathways*, will probably never make it onto a PC. Now also companies like MacPlay and Lion are putting games like *Wolfenstein* and *Doom* out for the Mac. To bad I have to wait until April to get my first taste of *Doom* for my Mac.

Some games like *Myst*, for instance, even come out for Mac before they come out on PC. Maybe the days of waiting for a Mac port are finally over. Thank you for reading this letter. I

corresponding

Hope you will take my idea into consideration. Thanks again.

JesseW1622@aol.com

The news of Pippin (see **NEXT Generation #2**) is certainly a boost for Mac development, but so far there's been little to cheer about for Mac owners in the gaming department. There are very few Mac-only games, the majority are simply titles ported from other machines. Having said that, things are improving — read **NEXT Generation's** first Macintosh reviews on page 91.

Great first issue from the console-based game standpoint, but where were the computer games?! There was not a single computer game in your alpha section, not even a PC game. The computer gaming world is desperately in need of one magazine that will keep them on cutting edge of the technological news, while tying them in to the turbulent world of TV-based systems which so greatly influences the products we see on our MPcs. **NEXT Generation** has what it takes to be that magazine but you must step forward and make the commitment to more extensively covering computer games and technology. This is what, in the long run, is truly going to separate you from magazines like *Electronic Gaming Monthly* and *GamePro*. You bill yourself as covering "CD-ROM, 3DO, Sega, Nintendo, Sony, Jaguar, arcade, on-line, CD-i and SNK!" Cover each one of them with equal fortitude and you will be the magazine of the future!

Chris Laughlin
ARPA/INTERNET:
Chris.Laughlin@r13.n132.z1
.fidonet.org

Fair criticism. As the timing of **NEXT Generation's** launch coincided exactly with the release of Saturn and PlayStation in Japan, it seemed obvious to concentrate on these new and significant systems. Our second issue includes more games in development, i.e. "alphas," on PC games, including reviews on *Bioforce*, *Absolute Zero*, and *Alone in the Dark 3*, among others, and

you can also find complete game reviews, including reviews of PC games in the "finals" section. We'll certainly be introducing more PC coverage as (or should that be "if?") the novelty of these machines wears down...

Hey I think y'all have a great mag going on right now. I love the format of how it is set up. I really want to see more and know everything there is to know about the Ultra 64. Please put more information about it in the next issue, and future games and specs of it, I'm sending out my subscription card today.

LuisGarc
LuisGarc@aol.com

Information on Ultra 64 is thin on the ground. Both Nintendo and Silicon Graphics are keeping a tight lid on all but the most sketchy (and positive-sounding) details. If we sound quiet on the subject, it's because we want to make sure that we bring you the facts, not just half-baked rumors. However, more and more news is expected as months go by — and **NEXT Generation's** newshounds are on the case.

On a recent Sega commercial advertising the 32X, Sega claimed 32X was six times more powerful than 3DO. How is this true when we already know how far superior 3DO is in comparison to the 32X? Is completely Sega lying to us, or is the 32X really more powerful?

MSVelez
msvelez@aol.com

Yeah, and 3DO claims that it's 50 times more powerful than a Genesis. The fact is that both companies are probably correct, it's just a matter of how you measure "powerful" — be it speed of CPU, screen resolution or whatever. Marketing statistics are truly amazing "facts." Just remember this: A statistician is someone who can sit with his head in a refrigerator and his feet in an oven and tell you that — on the whole — he's feeling completely normal.

Don't trust 'em!



Letters from desks on the front line



Tom Zito,
president of
Digital Pictures
and creator of
Night Trap.

A few nights ago, I looked through some photos from a press event. Digital Pictures had thrown last November to introduce five of our new products, and I came across a crappy little Polaroid that conjured up tremendous implications for the future of the interactive industry.

Oddly enough, part of the power of the image was that the person who captured the moment had no idea who the subjects were. It's a classic Budweiser moment: old friends trying to hold a conversation, all the while accommodating some strolling snap shooter.

Here's the lineup in that snap: Steve Russell, who in 1962 in the basement of MIT unleashed the curse of videogames (in the form of *SpaceWar!*) on an unsuspecting world; Nolan Bushnell, who started Atari in his daughter's bedroom, and brilliantly commercialized what Russell had begun in hacker selflessness; and Al Corns, the unassuming, understated Berkeley engineer who designed and built the very first *Pong* arcade game.

In staring at that photo, it occurred to me that there really haven't been all that many breakthrough games since *SpaceWar!* and *Pong*, and that the real responsibility for all of us in the interactive business is to keep pushing the envelope to create the kind of cutting edge experiences which will ensure that our industry stays fresh and continues to flourish.

I'm not sure we've done that great a job.

If you talk to Russell (and I do every day since he works here at Digital), he'll tell you that *SpaceWar!* really grew out of a playful desire to discover just how much empowerment a DEC PDP-1 could instill in a construct science-fiction universe. Alcorn says his goal was much simpler: he wanted to create a sports challenge during which one hand could remain wrapped firmly around a cold bottle of Budweiser.

What made *Pong* and *SpaceWar!* great? They were genuinely breakthrough concepts: nobody had ever seen a computer play a game until Russell came along, and nobody had ever put a computer into a bar before Bushnell and Alcorn. Technology took on a playful aspect: it delivered instant gratification and it was fun.

Perhaps even more importantly, the technology itself was transparent: you didn't need — or want — to know that you were dealing with a processor; the computer simply enable you to have an experience you couldn't have anywhere else, and it felt very natural.

That's the approach we've taken at Digital Pictures. We try to create environments that on the surface look and sound and feel just like what you'd normally have on television and then — WHAM — you round a corner and find yourself transported into a very real conflict with you at the center, whether you're playing the role of a Navy Seal air-dropped onto a voodoo-infested island of the dead or a 16th century Chinese warrior summoned to save a village.

And we're constantly striving to create experiences that feel more and more like television and less and less like what some are referring to as virtual reality because we believe that, ultimately, people become

engrossed in dramas that have real human impact.

As simple as it might seem, having Dana Plato in *Night Trap* implore the player to save a house guest from an impending encounter with a vampire is a much more universally understood motivator than most dramatic devices used in videogames. There's nothing virtual about her concern or the threat to the house guest. This has been the crux of drama since the time of the time of the Greeks, and computers aren't going to change that.

I'm not suggesting that *Night Trap* is the state-of-the-art in gaming (or drama, for that matter; anyone who looks at, say, the richness and depth of *Supreme Warrior* can see how far we've come since making *Night Trap* in 1986); merely that full-motion video can convert what until now has been the domain of hard-core gamers into a much more broadly appealing universe. My mother would watch an interactive soap opera; but she would not play *Donkey Kong Country*, however amazing the graphics might be.

There's a certain irony in DP's obsession with Hollywood production values. It's no secret to anyone who knows me that I hate TV (or that I dropped out of film school because I hated working with actors — something I now realize was an arrogant folly of youth). Nine years ago, when I was a colleague of Bushnell at a toy company, I asked him the question: "Would it be possible to create an environment in which you could talk back to your television?"

Fifty million dollars later we're beginning to understand the answer. And interactive television is indeed a strange new world: one in which cutting-edge technology has to work hand-in-hand with some of the oldest forms of storytelling. When it works it's delightful; when it doesn't, it's dreadful.

An example: *Slam City* with Scottie Pippen, a one-on-one streetball game we released this past holiday season. We've trounced hundreds of parents and

kids through focus groups over the years, and if there's one thing we've heard consistently, it's the theme of empowerment: let me do something in the real world that I ordinarily can't. The idea of playing against real professional athletes was high on most lists.

But part of the joy of playing basketball, for example, is that you can try to shoot or steal at any time. And while that's easy to do in a computer-generated cartoon environment, it's a real challenge with film. Not only do you have to develop the underlying technology (we call it InstaSwitch) that allows you to have several options instantaneously available at the touch of a button; you also have to go out and film all the shots you need to string together a game — over 3,000 on four CDs in the case of *Slam City*. As the pioneers of Full Motion Video products, we're concerned about companies that are looking to jump onto a bandwagon they simply don't understand — and in so doing put the rest of the interactive industry at risk: claims of gee-whiz technology that don't deliver; reshapes of old gameplay ideas; and transparent uses of standard gimmicks to veil weak ordinary storylines.

We've invested tens of millions of dollars to get this right. Indeed, we've been called crazy for spending as much money as we have on our products. Our production budgets alone for a single show often reach \$2 or \$3 million dollars. Many critics point out that it's virtually impossible to make a profit at those budgets.

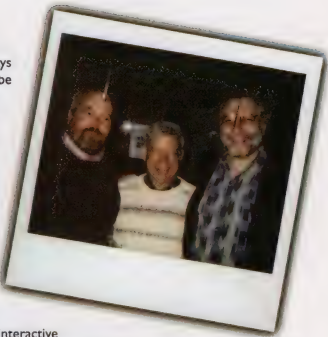
Our response is simple: a good product can sell well and make money. *Sewer Shark*, which we produced in 1987 for \$3 million, has grossed about \$18 million at retail — and that does not include the half million or so copies that were bundled with the Sega CD system. More importantly, we believe that the future of cable is interactive, and that companies like Digital Pictures, with a library of interactive products that look and feel like television, will fare very well in the interactive cable

era of the near future.

Besides all that, we've always been proud to be creating an industry. In the long run, neither gamers nor more general consumers will tolerate dramas with interminable lag times, bad acting and silly plots. In 1988, we abandoned interactive versions of *Police Academy* and *Star Trek* (which had cost us about \$4 million) because they simply didn't hold up next to their noninteractive counterparts. We knew we would have to create products that could stand the test of time — and the remote control: We think that our ultimate competition is what's on television, not what's shrink-wrapped in a game box.

And we think our products are so much the better for what we've learned from our mistakes and the new challenges we constantly raise for ourselves. If we're creating an interactive chop-sake saga, we go to Hong Kong. Voodoo Island? The Caribbean. Right now we're working on a *Mad-Maxish*, postapocalyptic world. Needless to say, we're shooting footage in Australia.

But big budget production is no guarantee of a great FMV experience. It also calls for a collaborative effort on the part of writers, directors, designers, actors, programmers, graphic artists. Achieving this collaboration is no easy task since Silicon Valley and Hollywood types don't really think the same way: Directors tend to see themselves as solo storytellers; Programmers are the gods of their creations. Yet it is this collaboration that is most central to a product's success — or not — since it's the result of that teamwork which shows up on the screen — or doesn't.



Given the risks, the cost and the high probability of failure, why have we, here at Digital Pictures, chosen to stake our future on live-action interactive videogames when creating them on a computer screen would be much easier?

In a word (or five), because we're betting on the future.

We're betting, ultimately, when there's an interactive cable converter sitting atop everyone's TV set, that something that feels like *Citizen Kane* (or at least *Leave It to Beaver*) will have more legs than something that feels like *Mario* and *Princess Toadstool*.

ng

Mailshot

Want to get something off your chest in ten words or less? Want to send an anonymous message of respect/abuse to the programmers of your last software purchase? Mailshot the interactive entertainment industry! Post it here, usual address:

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Deluxe Paint Animation

GAME PROGRAMMERS:

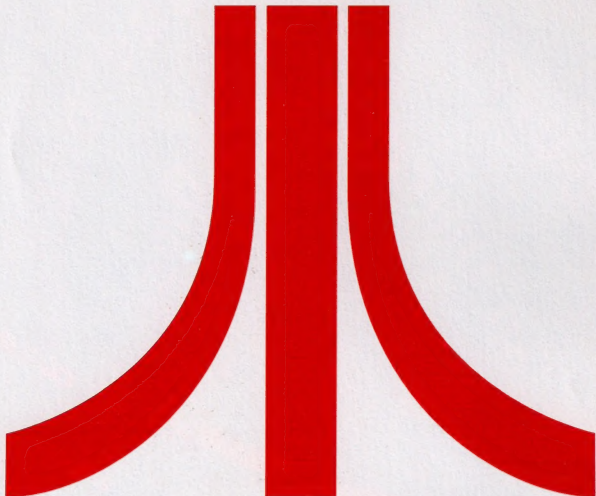
Must possess strong "C" and problem solving skills along with experience in: 80x86, 68000, 6502, RISC, 2D or 3D Graphics techniques. Previous game development experience or a college degree is required.

**IGUANA ENTERTAINMENT, INC., Personnel Dept. N, 3410 Far West Blvd., Suite 301
Austin, TX 78731 USA**

ending

Next Month

Elder Statesman or Ailing Geriatric?



Atari has attracted scathing criticism in recent months — not least from **NEXT Generation** — over its apparent inability to exploit the Jaguar's potential. Charges of incompetence and rumors of impoverishment have done little to engender confidence in the company's future.

But this isn't just another insignificant, fly-by-night outfit we're talking about here. This is a company that actually created the videogame industry and, after 20 years, is still in the game.

Next month **NEXT Generation** charts the rise and fall of the legend that is Atari, and reveals that not only is news of its demise greatly exaggerated, but that it could be about to turn the entire game community upside down.

**NEXT Generation #3
on sale March 21, 1995.**

Of course, astute consumers will have their copy delivered to their doors.
Find out how between page 32 and 33.



If you can read this, you know what it's like doing a few too many barrel rolls, head bounces and triple reverses on Uniracers... Omega... I think I'm gonna hurl...



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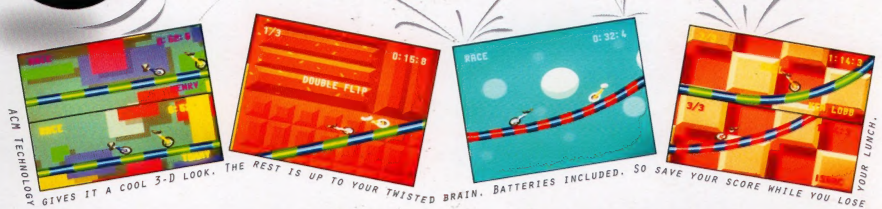


Q: O.K., you're doing 150 out of the half-pipe when suddenly there's this patch of sticky goo in the road ahead...whataya do?

A: "Use caution?" BZZZZT-WRONG! You floor it and go for the triple Z flip...**DUH!**



This is **Uniracers™**! Where it's not whether you win or lose, it's how you thrash along the way. **Big stunts** mean big points. Because when this hot dog cooks, there's nothing like it.



OK, maybe if you ripped three wheels off your skateboard, twirled around about 100 times and climbed on a greasy speed ramp...yeah, I guess that's sorta like it. But with Uniracers you can **go head to head** with your homeys from the safety of a well-padded sofa. And if you try this kind of craziness on the street... **SCAB CITY.**

ooh... I think I'm gonna hurl again.

Only For
SUPER NINTENDO
Entertainment System



NEXT
GENERATION

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